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Smart Computing®

In Plain English

INTERNET TROUBLESHOOTING

Protect Yourself

Against VIRUSES & SPYWARE

SPEED UP YOUR INTERNET CONNECTION

GET MORE OUT OF THE WEB

SURF THE INTERNET SAFELY

Transfer Your Address Book To Your Cell Phone p.79

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THIS MONTH'S COVER STORY:

Internet Safety & Troubleshooting

Reviews

GREEN FIELDS 3D
SCREENSAVER 1.0

Editor's Note: Reinstall Your Operating System

We utilize many technologies without really thinking about them or giving much consideration to how they actually function. Every day we drive our automobiles, talk on our telephones, watch our televisions, and rely on our watches, and we almost never worry about what makes them work.

Until they stop working, that is. Then, suddenly, how these technologies operate (or fail to operate) becomes a matter of some importance.

It's the same with the Internet or, more accurately, with the mechanisms that allow us to connect to various computers using the Internet as a medium. Again, we rarely think much about how the 'Net functions—until it stops functioning. At that point, we become exceedingly interested in why we've suddenly lost the ability to surf the Web, instant message our friends, or send and receive email.

Although recent advances have made accessing the Internet a fairly simple process from the perspective of the end-user, there's really nothing simple about the Internet at all. The truth is that the Internet relies on a sophisticated complex of interdependent technologies in order to function: It's truly a network of networks, and any glitch at or between any of the nodes of that network can cause problems. It's not "black magic," but sometimes we feel as if it might as well be. There's a lot that can go wrong, and sometimes it does.

Of course, there's not much we can do about it if eBay's server goes down or if our telephone or cable line is cut. As end-users, we can only address issues that are under our control. But there are many issues that *are* under our control, if only we knew how to control them.

That's what this issue is all about. We'll show you how to address those issues—or how to avoid them in the first place—so that you can continue to surf the Web easily, efficiently and, perhaps most important of all, safely.

Rod Scher, Publication Editor

Now Available On Newsstands …

Computer Power User * Make Your Rig Scream

Buying new hardware isn't the only way to squeeze more power out of your PC; stoke the fire inside your system's case with help from more than a dozen pages of OS, BIOS, and hardware tweaks.

PC Today * Palm + Windows

The Treo 700w smartphone represents the first-ever collaboration between Palm and Microsoft. In the April *PC Today* we examine the collaboration and offer an introduction to the Windows Mobile operating system for those accustomed to using Palm OS.

CE Lifestyles * Creative CE Projects

Who wouldn't love stylish new prints for their living room walls? Or a keepsake DVD full of Grandma and Grandpa reminiscing about their courtship days? These and other creative projects are both easy and fun to make with common CE products such as a digital camera, digital camcorder, PC, and printer. With our help, you can let your imagination run wild.

Reference Series * How To Prepare & File Taxes On Your PC

It's that time of year again: The threat of having to do your taxes looms large, and you're not looking forward to the job. Don't despair, we can help. This issue of the *Reference Series* will tell you everything you need to know about using your computer to prepare and file those dreaded returns; we'll even get you set up so that next year won't be quite so . . . well, taxing.

Corrections/Clarifications

On page 11 of our February issue, we discussed Sony's "free" IVE VoIP service. We should have noted that the service is free *only* if you're using it to call other IVE users.

April Web-Only Articles

Smart Computing subscribers may read the following articles at SmartComputing.com.

Email

Microsoft Money

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DESKTOPS & LAPTOPS

Make Way For The Media Center

With the recent launch of Intel's high-powered Viiv platform and the continued evolution of Microsoft's Windows Media Center OS (operating system), the future looks bright for entertainment PCs, particularly because the companies are working together in this arena for the first time.

Intel appears to be taking no performance-related chances with Viiv (rhymes with "five"), which will feature dual-core, 64-bit processors that are based on the company's Centrino platform and integrated into set-top boxes and PCs designed for the living room. The hardware will support up to 7.1-channel surround sound and high-definition video, and you can instantly turn it on and off with the touch of a button. Support also is provided for TV-like remote controls, which will be included with systems or available as a separate purchase.

As part of an agreement with The DIRECTV Group, Intel and DI-RECTV will create set-top boxes to receive feeds from DIRECTV satellites and deliver the media to displays in various rooms, which marks a departure from typical entertainment PCs that require set-top boxes to be integrated with home networks. Plenty of other announcements emerged with the Viiv release, including Intel's plans to bring Google Video to the platform, along with ESPN Motion and ESPN Full Court Online; music, photos, and personalized video content from Yahoo!; and optimized content from Comedy Central, MTV, and VH1.

At the 2006 CES (Consumer Electronics Show) convention, Microsoft Chairman Bill Gates touted the successes of Windows XP Media Center Edition, explaining that the company sold 6.5 million copies in three years. That number continues to build, and Current Analysis said that 47% of all home desktop PCs sold in the United States in December were Media Center PCs. Like Intel, Microsoft is working with DIRECTV to boost the media PC experience. Users will be able to transfer DIRECTV content to Windows-based PCs and access music, video, and pictures stored on a PC using a DIRECTV set-top box.

As we edge closer to the release of Vista, Microsoft's successor to WinXP, some analysts predict that Microsoft might opt to integrate all Media Center features directly into Vista rather than release a separate Windows edition. At CES, Gates explained that there will be at least some Media Center features in Vista to provide access to a wealth of entertainment, including music, pictures, live and recorded television, as well as on-demand content and online services. Vista also will feature CableCARD support, which lets users watch and record premium and high-definition cable programming. ∎

Beyond Next-Gen Storage

If you're getting tired of the hype surrounding Blu-ray and HD-DVD, fret no more because actual time frames are emerging for the release of the next-generation storage technologies. One of the companies leading the way is Fujifilm, which claims it will release both Blu-ray and HD-DVD media in mid-2006. But Fujifilm isn't stopping there—the company also is working to develop new holographic storage technologies that promise multiple-terabyte optical capacities for entertainment, commercial, and consumer applications.

When compared to Blu-ray media, which can hold 25GB, and HD-DVD media, which can hold 15GB, holographic discs could transform the storage landscape far beyond even this upcoming generation. Fujifilm puts it this way: A single terabyte of holographic disc storage is roughly the same as 16 days of continuously running DVD movies, or 8,000 times more data than a human brain retains in a lifetime.

According to Fujifilm, holographic technology imprints "images" of full data pages into light-sensitive material using laser technology. Although the company didn't provide price estimates at this time, some experts predict that in four or five years, we'll see 1.6TB discs that will retail for about $100. Current versions in the works hold 300GB and boast 160MBps (megabytes per second) data throughput rates. ▮
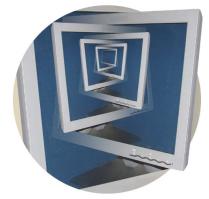
Say Hello To LCD Overflow

If you buy a CRT (cathode-ray tube) monitor this year, consider yourself in the minority. DisplayBank predicts that of the 155 million monitors/displays that will be sold in 2006, LCDs (liquid-crystal displays) will account for 125 million (80%) of them.

LCD shipments should increase by 19% this year and CRT shipments should drop by 31%, which are figures that roughly mirror those of 2005. Monitor shipments worldwide aren't expected to grow substantially due to the continuing transition to notebook computers, with DisplayBank predicting only a 4% growth.

Meanwhile, analysts are saying that the market is about to be bombarded with LCDs, with oversupply rates reaching 9.7% in the first quarter, 13.8% in the second quarter, and 15% in the third quarter. For consumers, this should equate to hefty price reductions on LCDs, so if you're looking to replace your CRT or upgrade your existing LCD, this year could be the right time to do it.

The LCD glut also is expected to affect the home entertainment market, where buyers of LCD televisions could enjoy similarly substantial price cuts. That global market also saw the impressive growth last year of 116% over that of 2004, reports Analysys International, who predicted that 37-inch and larger LCD televisions will become mainstream in 2007. ▮

Wrap It Up & Take It With You

Keyboard manufacturers try their best to make portable keyboards truly convenient enough to use on the road, but despite their best efforts, many of these devices are still rather bulky. However, times are a-changin' and products are adapting, leading to the first fabric keyboard that can be rolled up and stuffed in a shirt pocket.

Eleksen's ElekTex Smart Fabric wireless keyboard weighs a mere 2.4 ounces and is made from 100% fabric that's water-repellent and durable. The keyboard requires two AAA batteries and uses Bluetooth to connect to any Microsoft Windows Mobile 2003 Pocket PC, smartphone, or Symbian Smartphone S60 or UIQ-based devices. Included is a smartphone/PDA (personal digital assistant) stand and embedded LCDs that show keyboard and Bluetooth connectivity status.

"Where existing key pads on many smartphones and PDAs make typing anything longer than a short message impractical and uncomfortable, we've designed the laptop-sized ElekTex fabric keyboard to allow consumers to easily and more comfortably type longer documents on their phones and hand-held devices, making these new portable devices more usable," says Andrew Newman, Eleksen product manager.

The standard design of the ElecTex features charcoal-gray fabric, but other fabric colors and brandable graphics also are available. ∎

With the ElekTex Smart Fabric wireless keyboard, you'll no longer need to worry about your mobile keyboard monopolizing all your precious travel space.

Good As Gold

Imagine opening your PC case and striking gold among all that dust and grime. Though it sounds far-fetched, the premise could become a reality in the future—if current research at the U.S. Department of Energy's Argonne National Laboratory is any indication.

Researchers there discovered that gold exhibits properties at the nanoscale level that could lead to advances in future optical chips that power computers or switches and routers in fiber networks. At the nanoscale level, which represents one-billionth of a meter (about 70,000 times smaller than the width of a human hair), materials display far different temperature, electricity, and magnetism readings than conventional materials. As such, Argonne researchers found that gold, in particular, let them control the wavelength of light emitted when electrons are stimulated—a discovery that could allow them to use gold as a light source inside of optical chips. This, in turn, would enable efficient data flow through the light.

Although the team leader, Gary Wiederrecht, stressed that the research is still in a primitive stage, the technology has the potential to lead to faster and smaller optical devices. Furthermore, the optical chips could have the ability to switch or route optical signals without performing an electronic conversion. ∎

Cruise Control Your Drivers

Updating your hardware drivers on a regular basis can help your devices run smoothly and stay compatible with Windows and other software. But scouring the Web for drivers can be a difficult task, especially if your system uses devices made by obscure manufacturers.

But TouchStone Software offers a potential solution to updating drivers with its Driver Agent service (www.driveragent.com), which scans your system and provides instant access to thousands of the most recent drivers for a one-time $29.95 membership fee. We gave the service a test drive and came away impressed with its speed and depth.

After installing an ActiveX control, you can perform a system scan with the click of a button and wait only a few moments for results. These results display as a list of all your devices, along with a pie graph that shows the percentage of "good" drivers and "bad" drivers. In the list, bad (most likely, outdated) drivers are accompanied by a disk icon that leads directly to a download page featuring the latest drivers for the device. You also can click the device listings to see all the available drivers for the devices, but these listings occasionally contain beta versions of drivers, which could cause problems if you decide to try them.

If you need a one-stop shop for device drivers, DriverScan is easy to use and thorough, but be sure to use the recommended drivers if you're not prepared to deal with problems resulting from beta or other experimental versions. ▌

Using Driver Agent's slick, Web-based interface, you'll get an in-depth snapshot of your driver environment, which will point out the drivers you need to update.

Monkey Around With The Web

If you're using Firefox to develop Web pages, don't take another step without grabbing Greasemonkey (greasemonkey.mozdev .org), a clever extension that lets you infuse DHTML (Dynamic Hypertext Markup Language) scripts into Web pages to add functionality. Even if you aren't developing your own pages, Greasemonkey lets you alter the content and behavior of sites that aren't even your own.

For example, if you visit a book retailer other than Amazon .com, you can create a script that will automatically display Amazon .com's price for the same book. Or you can remove annoyances inherent with certain sites, such as video ads or mouseover pop-ups. If you have kids, you can even force sites to filter content by using such scripts as the Blockbuster Ratings Filter, which removes R-rated movies from the catalog display (or if you're feeling adventurous, you can add a script that shuffles the movies in your queue). Not all sites can be modified, but there's an amazing amount that can, including some biggies, including About.com, CNN, eBay, ESPN, FOXNews, Google, *The New York Times*, Slashdot, Weather.com, and Wikipedia.

Because Greasemonkey is highly configurable, be careful when choosing and using scripts because poorly written code can send your personal data to a third party. Experts suggest inspecting scripts before using them. ▌

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Rumors Making The Rounds

In a recent surprising admission from Sun Microsystems' co-founder Bill Joy, Sun and Apple almost merged on several occasions in the past, claiming that it was a "personal disappointment" that the two companies never quite tied the knot. He said that some of the deals on the table included Sun and Apple sharing a software interface and Sun trying to convince Apple to move to the SPARC architecture.

A pending patent infringement lawsuit by patent license firm NTP against BlackBerry creator RIM (Research In Motion) has observers pondering what would happen with government users of the handheld devices if courts demand an injunction against RIM. Although government users would apparently be exempt from such a ruling, the question remains as to whether such an exemption would be technically possible. RIM told the court that "it would be extraordinarily difficult, if not impossible, for the court to devise, implement, and continue to administer any injunction that would not disrupt or diminish the use of the BlackBerry devices by the mass of BlackBerry users that NTP concedes should be exempt." According to RIM, more than 1 million BlackBerry users would require exemptions.
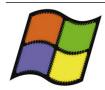
Could Sony's rootkit debacle be just the tip of the iceberg? Quite possibly, especially when it appears that other companies might start owning up to such tactics before consumers discover them and blow the whistle. In fact, it was Mark Russinovich, the man who discovered the Sony rootkit, who also recently discovered similar technology in Symantec's Norton SystemWorks. In this case, Symantec used a hidden directory to prevent users from deleting files, but the move also could allow crackers to hide malware in it. For its part, Symantec issued an update to fix the potential security problem.

Brian Krebs, blogger at *The Washington Post*, revealed results of some interesting research that detailed how Microsoft is taking longer than ever to release patches for known problems. Krebs writes: "Over the past three years, Microsoft has actually taken longer to issue critical fixes when researchers waited to disclose their research until after the company issued a patch. In 2003, Microsoft took an average of three months to issue patches for problems reported to them. In 2004, that time frame shot up to 134.5 days, a number that remained virtually unchanged in 2005."

A recent update to Apple iTunes has some users worried that Apple is trying to spy on them. A new feature called MiniStore not only displays albums available from the artist of the current song that's playing and other titles bought by other iTunes users, but it also sends information to Apple, which in turns sends targeted album advertising back to you. Apple claims it's not saving the information.

DULY QUOTED "Just as a Chihuahua is still a dog, these ice dwarfs are still planetary bodies. The misfit becomes the average. The Pluto-like objects are more typical in our solar system than the nearby planets we first knew."

—Alan Stern, principal mission investigator of the Southwest Research Institute, employs an apparent dislike of tiny canines to describe icy objects that inhabit our solar system.
(Source: Associated Press)

This tiny new Bluetooth headset from Nokia packs up to six hours of talk time and 160 hours of standby time into its tiny, 9-gram frame.

CONVERGENT TECH: PDAs & SMARTPHONES

Bluetooth On The Rise

Although Bluetooth has seemingly advanced at a slow crawl since its hype machine began running years ago, the wireless technology finally seems poised for a breakout, and new product releases are showing hints of just that.

According to Strategy Analytics, the market for Bluetooth-enabled devices ballooned to more than 272 million units in 2005, or more than twice the number that shipped globally in 2004. In particular, Bluetooth-enabled mobile phones saw huge sales, which should continue this year, Nokia reports.

"The Bluetooth-enabled mobile phone market grew to 133 million units in 2005, and we expect it to grow to 220 million units in 2006," says Razvan Olosu, vice president of Mobile Enhancements at Nokia.

At this year's CES convention, Nokia announced three new Bluetooth headsets, the smallest of which weighs only 9 grams. That headset is the BH-800 ($140), which comes in coffee-black or silver-white colors, includes a removable ear loop for use in either ear, and has a strap that lets

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New Products Hardware

Compiled by Kylee Dickey

Quick takes on the latest hardware and software to hit the market at press time. Manufacturers' and publishers' release dates are subject to change, so some products may not be available when you read this. (Logos indicate products are compatible with either Windows or Macintosh only.)

Product	Phone	Web	Description
256MB Collegiate Attaché USB 2.0 Flash Drive PNY Technologies $29.99	(800) 769-7079	www.pny.com	*A USB thumb drive that displays the logo of your favorite university*
500GB WD Caviar SE16 (#WD5000KS) Western Digital • $349.99	(949) 672-7000	www.wdc.com	*A 7,200rpm hard drive with a 16MB cache that stores up to half a terabyte of data*
e-STUDIO300P TABS (Toshiba America Business Solutions) • $399	(800) 316-0920 (949) 583-3000	www.copiers.toshiba.com	*30ppm workgroup laser printer with true 1,200 x 1,200dpi resolution*
Flash Wristband Imation $34.99	(888) 466-3456 (651) 704-4000	www.imation.com	*Instead of using a thumb drive, transport your files on this wristband with built-in flash memory*
Lumix DMC-FZ7K Panasonic • $399.95	(800) 211-7262 (201) 348-7000	www.panasonic.com	*A 6-megapixel camera with a 12X Leica DC VARIO-ELMARIT lens*
maccontrol maccontrol $799.90	(305) 576-8850	www.maccontrol.com	*Control your Mac, iPod, and entertainment system from a single remote control*
PhotoBook Creator Unibind • $99.99	(877) 246-3669	www.unibind.com	*Create hardcover photo books at home*
radius Leather Messenger (#TSM015US) Targus • $119.99	(877) 482-7487 (714) 765-5555		*A black leather notebook case with a faux orange suede lining and a retractable airline ticket holder*
Sportfolio for Mac mini Marware $44.95	(954) 927-6031	www.marware.com	*A padded carrying case designed especially for the tiny Mac mini*

users place and remove the headset with one hand. The BH-800 supports up to six hours of talk time and 160 hours of standby time; plus, it includes power buttons, volume control, and call-answering buttons that give users the same control over calls that they'd expect with a wired phone. Voice-recognition capabilities let users make calls and redial without touching the device.

Also new is the 18-gram BH-900 ($100) headset, which features noise reduction, echo cancellation, and

support for up to eight hours of talk time and 180 hours of standby time. Another new product, the 14-gram BH-200 ($55), features support for up to 5.5 hours of talk time and 150 hours of standby time.

Bluetooth also is beginning to appear in other, stranger areas, such as apparel. For example, take a look at the Audex cargo jacket ($599; www .audextech.com) with integrated Bluetooth technology from Motorola. Although it looks like your everyday winter jacket at first glance, this

high-tech apparel provides a control panel on the left sleeve that lets you browse your mobile phone's address book and call contacts using a built-in microphone in the collar. You also can scroll through and select songs in playlist mode on your iPod—all without removing the device from your pocket. The jacket even features two speakers in the hood, but provides a 3.5mm jack if you'd prefer to use your own headphones. And of course, the electronics are removable for washing ease. ▮

New Products Software

Accent Internet Password Recovery Personal AccentSoft Team $34.95	info@accentsoft.com	www.password recoverytools.com	*Recover forgotten Web and application passwords*
AVS Video Converter 4.3 Online Media Technologies • $29.95	info@avsmedia.com	www.avsmedia.com	*Convert, edit, and burn your videos*
The Bat! Voyager 3 Ritlabs $57.86	office@ritlabs.com	www.ritlabs.com	*Software that loads onto a flash drive and lets you access and send email when you're away from home*
Centico Photo Album 1.0 Centico • $49.95	info3@centico.com	www.centico.com	*Simplify the backup of digital images, add notes to photo collections, and group images*
FlashSpring Pro 1.3 CPS Labs $149	info@cpslabs.net	www.flashspring.com	*PowerPoint plug-in that converts PowerPoint presentations into the Flash format*
MemoryMiner GroupSmarts $60	info@memoryminer.com	www.memoryminer.com	*Label individuals in photos, indicate the dates of photos, create visual timelines, and locate pictures of individuals*
Remote Desktop for Mobiles ZZZ Software $29.99	support@desktopmobiles.com	www.desktopmobiles.com	*Access your desktop system from a cell phone, mobile device, or networked PC*
SingingCoach 3.0 Carry-A-Tune Technologies • $49.95	(888) 378-5050 (813) 886-1955	www.carryatune.com	*Software that comes with a headset and microphone and analyzes your pitch when you sing*

Happy Talk

In 2005, 807 million cell phones were sold. It's no wonder: It brings us instant communication no matter where we roam. Newer cell phones offer tons of useful features, as well. So in this month's TechMates column, I'd like to tell you about a great cell phone that is especially useful when paired with a comfortable wireless headset.

The cell phone is the Motorola RAZR V3. I like this phone because it has excellent battery life, clear transmissions, voice dialing, Bluetooth connectivity, and a speakerphone. I love this phone because it is the thinnest flip phone (3.9 inches tall x 2.1 inches wide x 0.54 inch thick) I've seen. It fits easily into my pocket.

I also love the phone's simple design and strong materials. There is little, if any, plastic. The entire shell is made of anodized aluminum. Even the keypad is metal. Instead of raised keys, the RAZR has flat metal keys with numbers and letters etched in the flat keypad. Light blue backlighting illuminates the phone keys, making them easy to see and use.

The RAZR has been touted as a cutting-edge fashion phone. It's amazingly good-looking in the brushed silver finish and also comes in jet black and magenta. Yet I was drawn to this phone more for its great features than its good looks.

I love the convenience of the flip phone. Open to answer and close to hang up with no key-locking necessary. This phone has a crisp and clear 2.5-inch color display. There is also a small display on the top of the phone, which lets you easily see the time, signal strength, and message indicators when the lid is closed. If you have caller ID, you can also see who is calling without opening the phone.

The RAZR is a quad-band GSM phone that pretty much has all the bells and whistles currently available. It has Java support, MP3 ringtones, a calculator, a date book, an alarm clock, a voice recorder, and games such as billiards and golf. The included camera even has a 4X digital zoom. I used the camera to pair my contacts with pictures, which then appear on the external screen to show who is calling. I'm not a big fan of text messaging, emailing, or Web browsing on such a small platform, but if you are, the RAZR can handle it for you.

Look, Ma: No Hands

To add to your wireless experience, you can pair the RAZR phone with the Plantronics Voyager 510 headset. While I talk a lot on my cell phone, I have never considered using headphones because of the wires, echoing sounds, and downright discomfort. The Voyager eliminates all my headphone objections. Because it is Bluetooth-enabled, it has no wires. The transmissions are so clear that people I talk to don't even know I'm using a headset. The Voyager is small, lightweight, and made of soft flexible rubber material. It comes with three ear adapters to fit all ear sizes, so it can be worn in either ear. It is comfortable even when I wear my glasses.

After you read the instructions, the Voyager is easy to set up. One nice feature is that it can be paired with two devices and can easily switch between the two. That means I can have one conversation on my RAZR phone and then switch to a Skype or Google Talk VoIP (Voice over IP) conversation on my Bluetooth-enabled PC without changing my headset or picking up my telephone. If you want to make calls from your landline phone, the $299.95 Voyager 510S Bluetooth Headset System bundle allows you to use the headset with an office or home desk phone.

The Voyager comes with a compact charger that you won't have to use much. The six hours of talk time is enough to keep me going for days at a time. The Voyager has several other nice features. It can generate more volume than most headsets I've tried. The whole device swivels, so it can fold flat when not in use. Foam protectors for the microphone are included to reduce wind noise when using outdoors. The one-button control lets you easily redial the last number dialed or initiate voice-activated calls from the headset. The only caveat is that the power button is very small and difficult to press.

The RAZR phone and the Voyager 510 headset are a useful pairing for anyone who is a heavy cell phone user. These products make the most of current technologies, resulting in truly useful tools and features that will appeal to everyday users. ❚❚

RAZR V3
Available for several carriers; prices vary with service plans
Motorola
(866) 289-6686
www.motorola.com

Voyager 510
$99.95
Plantronics
(800) 544-4660
www.plantronics.com

BY SANDY BERGER

Sandy Berger *is a nationally respected technology author and computing expert. Sandy's aim is to convey to others in easy-to-understand language what they need to know to take advantage of today's technology. Visit her at* **www.compukiss.com** *or email her at* **SandyB@smartcomputing.com**.

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Find Some Tunes

Pin The Player On The Music Service

Joshua Gulick

Send your comments to
joshua@smartcomputing.com

The portable music player is one of the coolest gadgets in our pockets. PDAs aren't extinct, but sit on any bus or plane, and you'll find more earphones than keypads. Even casual technology users are climbing aboard the portable player bandwagon.

But if my friends are any indication, music fans discover that their new players don't support the online music services they want. Many services offer songs in only one or two file formats. And no player supports all formats. But you can avoid this mess and come home with a player that matches your music service.

File Frenzy

Before you search for a player and music service, you'll need to bone up on a few music formats that sales people will toss around when they're pitching you. Here are three of the most well-known formats:

AAC. iTunes, Apple's online music service, offers only AAC (Advanced Audio Coding) songs.

MP3. The MP3 (Moving Picture Experts Group, Audio Layer 3) is one of the most popular music file types around. Most, if not all, portable music players support MP3s. In fact, many people refer to portable music players simply as MP3 players.

WMA. Microsoft's own music file type, WMA (Windows Media Audio) is very popular. Many portable players and online music services support it.

Apple Of My iTunes

Computer industry giants Microsoft and Apple are among those taking stabs at helping users match players with music. Apple characteristically keeps it simple: Only iPods support the songs you buy from its famous online music store/music player, iTunes. iPods also support MP3s.

iPods don't support Windows' WMA format. Many other music services offer only WMA songs. If you used Windows Media Player to rip your CD collection to your computer, you have WMA files that won't transfer to your iPod.

PlaysForSure

Microsoft's system rescues the sea of casual users who don't want to buy an iPod. PlaysForSure (www.playsforsure.com) is a compatibility service that helps users match players with music services. It's pretty straightforward: A portable music player that has the PlaysForSure logo will support any online music service that also has the logo. Several music services, including Musicmatch (www.musicmatch.com), Napster (www.napster.com), and Wal-Mart (www.walmart.com) are PlaysForSure members. Thus, if you fall in love with a particular music service, you can rush to the store and find a compatible device.

The PlaysForSure Web site is a fountain of digital music knowledge. It has detailed profiles of PlaysForSure-compatible music services, which means you can quickly compare service features without flipping among half a dozen music service Web sites. You can research portable music players in the same way.

Some devices are PlaysForSure-compatible after you install a firmware update. The Creative Zen Micro is a perfect example: It isn't PlaysForSure-compatible out of the box, but you can install a free firmware update that makes the device as compatible as the newer Micro Photo. If you want to see all of the available devices before making a decision, your best bet is to visit the Web site and browse its comprehensive list of players.

What's Next

Of course, the portable music player isn't going to stay at the top of my "cool gadget" list forever. The portable digital video player is getting ready to steal the show. Luckily for users who love the PlaysForSure matching system, Microsoft already has a PlaysForSure Video logo in place. ‖

5GB Zen Micro

(PlaysForSure Device)
$199.99
Creative
(800) 998-1000
(408) 428-6600
us.creative.com

PDA vs. Smartphone

The PDA Is Dead, Long Live The PDA

Chad Denton

Send Chad your opinions at
chad@smartcomputing.com

This isn't easy for me to say, but the PDA is dying. The PDA will always have a special place in my heart. It was the first hardware beat I covered when I started at *Smart Computing*. Back in 2000, the PDA beat was fun, exciting, and dynamic. I remember being in awe of the Palm V the first time I saw it and scoffing at first generation Windows CE devices only to watch as technology caught up to some of the devices' ambitious features.

But the PDA has become stagnant of late, and people are starting to talk more and more about a new kind of device: the smartphone. Sure, smartphones let us access our email and send SMS (Short Message Service) messages, but so do many cell phones. So what, exactly, do smartphones have to offer that make them more compelling than PDAs?

Convergence

I love my Tungsten E, but I only have so much pocket space, and if I have to choose between my Tungsten E and my cell phone, I'm going to grab my cell phone. Early smartphones touted the convenience of convergence. Rather than choosing between your cell phone and your PDA, you could carry both in a single device. Convergence implied a second luxury: the ability to consolidate all your contact information.

Convergence, however, had its problems. I'm glad my cell phone is lighter and smaller than my Tungsten E, but at the same time, I wouldn't want to try to read a to-do list on my cell phone's tiny screen. Early smartphones looked too much like a PDA or too much like a cell phone, and both designs were lacking.

Handspring's Treo was the first smartphone to strike a nice compromise between PDA and cell phone. Sure, the Treo's display is a little smaller than my Tungsten E, but at least the Treo bears some resemblance to a phone without being unusable as a PDA.

Connectivity

What really sets the smartphone apart from the PDA is connectivity, and it's this capability that shouldn't be overlooked. I'm not talking about merely staying in touch through email, SMS, and voice, because these days, many cell phones include such capabilities. Rather, it's the ability of software developers to integrate connectivity into their applications that's going to offer the biggest boon to the user.

MobiMate's WorldMate Pro (www.mobimate.com; $74.95 with a one year subscription) is an example of an application that really shines on wireless devices. The software lets you access the latest flight information, weather, and other important travel data. You can use the software on a nonwireless device, but in that case, you can only update information by synchronizing with an Internet-connected PC. On a wireless device, however, you can update data from anywhere with acceptable network coverage.
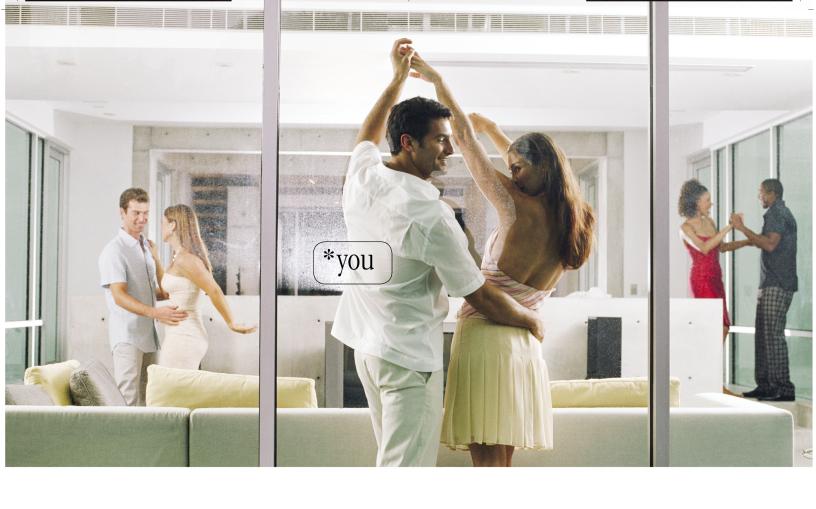
In Defense Of The PDA

There's still going to be a small market for standard PDAs for some time. One reason I haven't switched to a smartphone is that I don't want to pay the pricey fees associated with an unlimited data plan. And what's the point of having a smartphone if you have to watch your kilobytes?

Higher-end PDAs include Wi-Fi, which provides an interesting compromise. Using Wi-Fi, you can get the benefits of wireless connectivity without having to add a data plan to your cell phone bill. Most major cities have a growing list of establishments that offer free Wi-Fi access, and many users are installing home Wi-Fi networks.

While Wi-Fi provides one alternative to costly data plans, it doesn't provide the same kind of coverage your wireless carrier can. Stray too far from that coffee house, and you're going to lose your Wi-Fi connection.

No, the PDA isn't going anywhere anytime soon, but the battle between PDAs and smartphones is already over. As data plans come down in price, I expect most of us will gladly upgrade to networked mobile devices, and as sad as I am to see the PDA go, it'll be a good thing. ▌▌

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iPod iMprovement

Give Your iPod New Life With A New Battery

Kylee Dickey

Send your comments to
kylee@smartcomputing.com

I t's well-publicized that iPod batteries don't last forever and are not designed to be user-replaceable. Apple will replace the battery or your iPod free if you bought an AppleCare protection plan ($59). If you don't have AppleCare, Apple will provide a replacement iPod for $59. Of course, both options are pricey, and both mean you have to live for a few days without an iPod. There are many third-party replacement batteries available. I used Sonnet Technologies' 3G iPod Replacement Battery to replace a 2-1/2-year-old iPod's battery.

The Case That Wouldn't Open

Sonnet Technologies' kit came with everything I needed: a new battery pack, tools, and a CD-ROM video tutorial. I started by watching the video, which made the process look simple and straightforward.

However, I could not get the iPod's case open using the provided tools. I could get the tool inserted into one side of the case, but I couldn't slide it around the edge to loosen the case. In a fit of frustration, I searched online for others' experiences using the battery-replacement kit. The posts I read showed that most people had no problem opening the case. There were only a few, like me, who had difficulty.

Nathan, one of our other writers, opened an iPod mini case a while back. He suggested that I use a blow dryer to warm the edges of the case and loosen up its adhesive. When I tried his suggestion, the case did indeed wiggle a little bit more. Unfortunately, in my earlier attempts to pry the case open, I'd mangled the nylon tool that came with the battery, so I had to resort to using a butter knife to open the case. I was very lucky not to scratch my iPod. The case opened easily,

though, and I'm fairly certain that if the nylon tools were still in their original condition, they would have worked to open the case.

I believe my iPod's case was held together more tightly than most, and you probably won't encounter the problems I did. If you do, however, the blow dryer trick works wonders.

Power Up

It was very simple to install the new battery. As demonstrated in the video, I lifted the hard drive out of the case and set it aside. Then I used one of the nylon tools to gently lift the edge of the battery. I unplugged the battery's power connector from the iPod's motherboard.
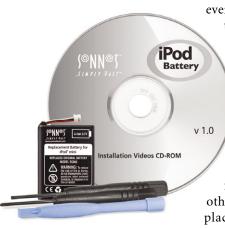
The rest was simple. I plugged the new battery's connector into the motherboard and carefully dropped the battery into place. I made sure the power connector's wires were tucked out of the way. The hard drive locked back into place easily, and the case snapped shut without any trouble. I was pleasantly surprised by how secure the case seemed after reassembly, too.

Before I could use my iPod, I had to plug it in to charge the new battery. To my relief, after I charged the battery and turned on the iPod, the Apple logo appeared, and the iPod menu displayed. Sonnet Technologies says its 3G iPod Replacement Battery lasts 30% longer than the original iPod battery, and my iPod does indeed operate longer on a single charge now than when it was new.

Do It Yourself Or Not?

Sonnet Technologies offers batteries for 1G, 2G, 3G, and 4G iPods, as well as iPod photos, iPods with color screens, and iPod minis. Check Sonnet Technologies' Web site for details because prices and specs vary according to model.

This type of battery replacement is not for everyone. When you open the case, you void the warranty, and you risk damaging or destroying your iPod. However, if you're OK with that risk and are comfortable tinkering with electronics, you might want to buy a third-party battery. ❚❚

3G iPod Battery (BAT-3G)
$29.95
Sonnet Technologies
(949) 587-3500
www.sonnettech.com

Car Computer Hacks

Track Vehicle Performance With CarChip

Nathan Chandler

*Send insights and insults
to Nathan at
nathan@smartcomputing.com*

CarChip E/X With Alarm

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(510) 732-9229
www.carchip.com

Cars are a lot more expensive than computers, and they've been around a lot longer, too, but strangely, it's much harder for most consumers to gauge and monitor their car's performance and usage history than with their PCs. Why, in the more substantial history of the automobile, isn't there a similar product for motor vehicles?

Actually, there is. It's called the CarChip, and not only might it save you a lot of money, but it might help save a life, too.

Chip Your Car

For many years now, cars have had built-in computers that monitor just about every aspect of the vehicle's performance, from coolant temperatures to RPM. Problem is, car makers offer only the vaguest of glimpses into this data; for example, your Service Engine light comes on . . . and, well, that's it. When that light appears, of course, you head to the service shop, where technicians download your car's data and—ahem—charge you a computer fee even if they don't find a problem.

The CarChip grants you access to your car's mother lode of onboard information, including diagnostic trouble codes that can help you pinpoint problems to determine if your car really needs service. If not, you can clear the code and reset the light.

What's more, the chip records four of 23 engine parameters, for up to 300 hours of driving time. That means you can log speed, RPM, acceleration, braking, and other parameters at intervals of five to 60 seconds, letting you monitor vehicle performance and track driving behaviors for everyone who gets behind the wheel.

Go, Speed Racer

Setting up the CarChip was easy. I installed the program from CD-ROM and connected the chip using the included USB cable. Then I clicked through the setup wizard, which helped me select the specific data I wanted to log. I also created thresholds that, if exceeded, would cause the chip to highlight the event with red in its data log.

With the setup complete, I connected the CarChip to my car's OBDII (onboard diagnostics, second generation) port. In almost every car made after 1996, this port is near your steering wheel, though it's usually just out of sight. Then I started driving, and after a few journeys, I downloaded the chip's data to my PC.

CarChip's software segments each data set by trip. A concise chart displays trip duration, miles traveled, maximum speed, and instances of hard braking and acceleration. Select each trip individually, and you'll get many more details, which you can view in tables and graphs. The data is so involved that you can tell, almost to the second, exactly how fast you, your spouse, or your rambunctious teenager were driving during a trip.

Chances are that the driver will already have an idea if they've exceeded preset thresholds. My CarChip version came with a built-in beeper that sounded when I drove too fast or braked too hard. The beep is annoying, and if you're looking for a way to condition someone to drive differently, this should provide some help. If you want the CarChip to keep tabs on someone's driving behavior, and they resist, they can't remove the chip without you knowing because a disconnect note will appear in the trip log. Alternatively, you could install a silent version of the CarChip and surreptitiously monitor driving data.

One Nifty Chip

With a CarChip in place, I found myself driving more conservatively, partly to avoid the aggravating beeps, but also simply because having the CarChip made me more aware of my driving habits, from speeding to overzealous braking and acceleration. My changed driving patterns saved me gas and wear and tear on my car and made me a more alert driver, too. So whether you're looking for a way to peer into your car's performance, sick to death of pointless service engine lights, or concerned about driving safety, the CarChip gives you a PC-powered peek under the hood. ❚❚

Digital Shutterbugs, Take Note

Photo-Editing Software Makes Great Pictures A Snap

Approximately half of all U.S. households now own digital cameras. It's easy to see why: Digital photography is cheap (no film to buy), cheap (users can print photos on an inkjet printer), and cheap (average digital camera prices continue to drop). But for best results, users should consider investing in photo-editing software.

Microsoft Digital Image Suite 2006

When one of the world's most widely known software companies puts out a program, people notice. Whether that program is worth the attention, however, is a valid question. In the case of Digital Image Suite 2006, the answer is yes.

Digital Image Suite consists of three applications: Editor (for editing), Library (for managing files), and Photo Story 3.1 (for creating slideshows). After a smooth installation, we took a look at the Library component. Like other programs in this roundup, Digital Image Suite immediately scanned the My Pictures and My Videos folders for image files, compiling those it found into a virtual database. It also gave us the option of adding images and videos from other parts of the system. Creating a file library can't get any easier than that.

But then everything is easy with Digital Image Suite, which is good, considering it ships without a users manual. To access the Editor component, we simply right-clicked the image we wanted to modify and selected Edit Picture. The resulting editor provided all of the expected features, as well as many advanced ones, such as the ability to straighten lopsided images and stitch several snapshots into one panoramic view. Newbies will have no problem using the various features, as each one is accompanied by a how-to task pane. Nor will they have any complaints about performance. Experienced users, on the other hand, may find some of the advanced editing tools lacking in precision. The Smart Erase tool left obvious smudges in its not-so-smart wake, for instance, while the Clone Brush seemed to work only when moving at 45-degree angles.

The third component of Digital Image Suite is Photo Story 3.1. Its intuitive wizard walks users through the process of creating slideshows complete with captions, image motion and transitions, voice narration, and background music. The results are first rate. However, our attempts to view slideshows within the suite resulted in error messages. (We later opened and viewed the files in Windows Media Player without any trouble.)
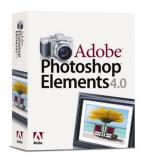
All error messages aside, Digital Image Suite offers a well-rounded photo-editing package that will appeal to amateur photographers seeking maximum functionality on a minimal learning curve. Prospective users who distrust Microsoft should take advantage of the 60-day free trial version available online (as of press time).

Corel Paint Shop Pro X

Like diners at an all-you-can-eat buffet, users of Paint Shop Pro X have no shortage of available options. The venerable photo-editing program is fully stocked with advanced features such as perspective correction, flaw removal, a 16-bit color palette, and a layers palette. It also comes bundled with Photo Album 6 for image management, Pixmantec RawShooter for format conversions, MyPublisher Book-Maker for crafting hard-cover photo albums, and an assortment of downloadable creative content.

But the merit of a program is not measured by quantity alone. Corel understands this. As a result, each feature performs at a level that will please experienced users. When removing an object, for instance, Paint Shop Pro allows users to specify the particular content that should fill the remaining space. It's this kind of precision that leads to professional-grade images, and it's why Paint Shop Pro has become a preferred tool among serious imaging enthusiasts.

Serious does not always translate to experienced, however. Understanding that some serious amateurs have little editing experience, Corel designed Paint Shop Pro to make few assumptions about a user's level of expertise. Its intuitive interface features on-screen step-by-step instructions—some more clearly written than others—that guide inexperienced users through complex editing tasks. (Users who need additional help can peruse the 106-page users manual.) More importantly, advanced editing functions, though always nearby, do not get in the way of simple editing tasks. Each project starts with a single layer, for instance. If users want to create more layers, they can open the Layers Palette and build away. But if the users don't know what layers are, they need not fumble around with them just to cut out a blemish or change the color of the sky.

In the end, Corel has improved upon an established product by making it accessible to a wider audience without sacrificing features or functionality. It's a novel concept and one that ought to earn it a larger share of an ever-growing market.

Adobe Photoshop Elements 4.0

For as long as consumers have been snapping digital photos, Adobe Photoshop has been the premiere program for editing them. Of course, the industrial-grade

product carries an industrial-grade price tag ($649) that prevents most imaging amateurs from taking advantage of it. That's why Adobe released Photoshop Elements.

Elements packages the most useful features of Adobe Photoshop in a tightly organized, no-nonsense interface. It boasts a variety of automatic editing tools and extensive color-correction options. It also provides excellent file management capabilities and an elaborate creation component for crafting everything from simple slide-shows to hard-cover photo albums. We appreciated the fact that all of the program's features are installed together as a single unit rather than as individual components. However, performance was markedly slow at times, even with the recommended 512MB of RAM. And like Paint Shop Pro, Photoshop Elements is compatible only with Windows XP. Users of other operating systems will have to consider Digital Image Suite or Nero PhotoShow Deluxe.

Although promoted as a consumer edition of Photoshop, Elements assumes a certain amount of technical proficiency and provides little on-screen assistance, which is why inexperienced users should expect to spend some time browsing the accompanying 207-page manual in order to learn how to use the program's various features. Users who know how to wield its many

BUYING TIPS

Before investing in a photo-editing program, users should review the software that came bundled with their digital cameras. They may already have a scaled-down version of a title listed here.

Software Information

	Price	Company	Contact Information	URL
Digital Image Suite 2006	$99.95	Microsoft	(425) 882-8080 (800) 642-7676	www.microsoft.com
Paint Shop Pro X	$129	Corel	(952) 930-9171 (800) 772-6735	www.corel.com
Photoshop Elements 4.0	$99.99 (box) $89.99 (download)	Adobe	(408) 536-6000 (800) 833-6687	www.adobe.com
PhotoShow Deluxe 4	$39.99	Nero	(818) 956-7551	www.nero.com
Picasa	Free	Google	(650) 253-0000	picasa.google.com

Scorecard

	Performance	Features	Ease Of Use	Installation	Support/Documents	Price	Overall Score
Digital Image Suite 2006	3	4	5	5	3	4	4/6
Paint Shop Pro X	5	5	4	5	4	4	**4.5/6**
Photoshop Elements 4.0	4	5	3	5	4	5	4.3/6
PhotoShow Deluxe 4	5	3	4	5	3	4	4/6
Picasa	5	2	4	4	3	5	3.8/6

tools will find Photoshop Elements to be a worthy companion. Others are likely to find Elements a bit overwhelming.

Nero PhotoShow Deluxe 4

Not everyone wants to spend $100 or more to edit digital snapshots. And, fortunately, not everyone needs to. Nero PhotoShow Deluxe 4 delivers essential file management, photo editing, and project-creation capabilities in a product that costs less than half of its more recognizable counterparts.

Casual users will find what they need in PhotoShow Deluxe. It automatically catalogs existing images during setup and allows users to sort the images by date and name. It also provides a one-click Share option that makes it easy to send favorite images by email. As for photo editing, the expected tools are there, including red-eye reduction, effects filters, touch-up tools, and text captioning. The interface can be awkward at times. Icons aren't labeled, for instance, and it isn't always clear how to save modified files. And users shouldn't bother looking for the kind of advanced functionality that lets them brush out flaws, fine-tune color levels, and straighten tilts. This program doesn't have them.

It does have photoshows, though. The user chooses the photos, a frame, the transition styles, captions and credits text, the speed, and background music. (The program ships with 275 audio tracks.) PhotoShow does the rest. The results are impressive. We were able to build an entire photoshow in a matter of minutes and then share it with friends by uploading it to a free personal Web page (provided by Nero).

Few programs make it this easy to touch up images, build slideshows, and share them with others. We advise amateur photographers with minimal photo-editing needs and lots of long-distance friends to consider Nero—but only after giving Picasa (see below) a try.

Picasa

Google's Picasa is a free photo-editing utility with one purpose: to help users share their pictures. Editing tools are minimal. Users can rotate images or crop them, adjust brightness and contrast, eliminate red-eye, and apply a dozen simple

effects. But that's about it. After all, the focus here is not modification but publication.

Toward that end, Picasa makes it easy to manage photos and even easier to print them locally, share them by email, compile them into a digital collage, post them to a personal blog, or order prints online. Users may have to go through brief registration processes the first time they use some of the publishing features. We ended up creating a blog with Blogger (www.blogger.com), for instance, and then had to install a separate photo-publishing utility to upload our photos to the Web. We performed both tasks with minimal effort but would have preferred that these features were integrated within Picasa itself.

It's hard to find much fault with Picasa simply because there isn't much there to fault. Serious digital photographers won't give the program a second look. And why would they? Picasa has nothing to offer them. But occasional photographers on tight budgets should give it a try. The only thing they have to lose is time.

A Pretty Picture

The good news for consumers is that it's easy—and, in at least one case, free—to find software that can help improve digital images and share them with others. The bad news is that it isn't so easy to decide what kind of editing functionality a particular consumer needs. Users certainly can't go wrong with Corel Paint Shop Pro X. By combining robust functionality with exceptional usability, this program earns the Smart Choice designation this month. ❚❚

BY JEFF DODD

BUYING TIPS

Smart photographers don't print edited images on 20-pound computer paper. They either invest in a top-of-the-line printer and a packet of photo paper or upload the images to an online printing service such as Kodak EasyShare Gallery (www.kodakgallery.com) or Best Buy imagelab (imagelab.bestbuy.com).

April 2006
Smart Choice
Corel Paint Shop Pro X

Clean Out Your PC's Closet

Fast Cleaner/ Clean Assistant

$19.95 download ($32.90 CD)
Eshinesoft
(877) 734-7638 (sales only)
eshinesoft.support@hotmail
.com (support)
www.fast-cleaner.com

Even with today's huge hard drives, it's not hard to fill them up, and an excessive number of files on your computer can affect both your available drive space and the efficiency of Windows.

Along comes Fast Cleaner, an extremely easy-to-use program that identifies nonessential files and presents them to you for deletion, thereby freeing space and reducing the size of the file table. The latest release (4.7) also includes Clean Assistant, which clears your Internet cache, cookies, and history, as well as other files not identified by Fast Cleaner. (The ratings in this review relate only to Fast Cleaner, as it is the primary target of the review.)

Fast Cleaner is thorough but cautious—it identifies files generally safe to delete, such as zero-byte (empty) files, temporary files used by programs, and memory dumps from a system or program crash. It automatically excludes system files, ensuring it won't interfere with Windows operation. As a precaution, Fast Cleaner also examines your system as it removes the files and won't delete any it thinks might be in use.

By default, Fast Cleaner lets you immediately delete (move to the Recycle Bin) the files it identifies by pressing the Clean button or view them by selecting the Details button on the initial search display. Click the Details button, deselect any files you wish to exclude, and then, with a single click of the Clean button, move the rest of the files to the Recycle Bin.

Fast Cleaner offers some nice bonus features, including the ability to select different file types for eradication. (All are generally safe for deletion, although a few, such as search results files, might be files you wish to keep.) From this display (click the Options button), you can also opt for immediate deletion of identified files or change Fast Cleaner's confirmation prompts. As an odd though beneficial bonus, Fast Cleaner lets you change the default programs that Windows opens for viewing files, exploring your hard drives, and drive checking and defragmenting.

On our first run of Fast Cleaner, it found over 3,600 files consuming nearly 200MB of drive space. It is not as thorough as other system cleaners, as it doesn't make recommendations about items such as incorrect system settings and bad Windows Registry entries. The upside of this is you don't have to fret about which recommendations are safe.

Fast Cleaner's new partner, Clean Assistant, isn't as helpful or user-friendly as Fast Cleaner. By default, Clean Assistant dumps your Internet files without interaction from you. Because the Fast Cleaner dumps cookies (including those from favorite sites with extensive customizations) and cached Web sites, you might want to review the files first (there is an option for this).

Clean Assistant lets you exclude files you want to save, but the process is rather torturous. If you do not want to dump all the files Clean Assistant finds, you have to individually select files to delete rather than selecting all the files and then unselecting the few you want to save. Optionally, you can select only to clean a single category, but you cannot select multiple categories (history and cache, but not cookies, for example).

Clean Assistant also offers the options to empty your Windows temporary folder (all items not used since a date you specify) and program history files, but these functions are even more restricted. You cannot view the files before deletion, and these are files that might affect system performance—or at least your ability to work efficiently.

Consequently, if you want to use Clean Assistant for these tasks, we recommend you change the default settings for temporary folder cleanup from three days to 30, have Fast Cleaner move those files to a backup folder (an option but not the default), and review the list of program history file categories it wants to delete. Optionally, you may want to skip this program altogether. ❚❚

BY JENNIFER FARWELL

Scorecard

Performance 4
Ease Of Use 5
Installation 4
Documentation 3
Price 4
Overall Score 4/5

Security

Zap Spam For Good

Ella For Spam Control

$29.95
Open Field Software
(831) 466-3000
info@openfieldsoftware.com
www.openfieldsoftware.com

Scorecard
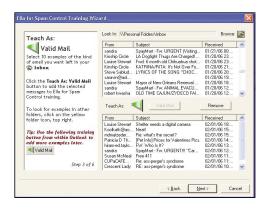
Performance 4
Ease Of Use 4
Installation 4
Documentation 3
Price 5
Overall Score 4/5

Ella For Spam Control is an Inbox organizer and antijunk filter for Outlook or Outlook Express that has users praising its virtues. Ella works on a simple principle—identify good or bad messages, and the program learns from the emails you select. However, Ella doesn't make assumptions many other programs make, so plan on a bit of training at the outset.

When you open your email client after installing Ella, the Training Wizard asks you to identify 30 messages, 10 for each of three folders. Options for your three folder categories include Valid Email, Inbox, Later, Junk, or any name you select. Because Ella only learns what to select based on messages you feed it, you could use Ella to prioritize your mail and ignore its junk-mail filtering capabilities.

Ella can work with Outlook's Rules and Alerts feature, but it may take a few tries before it gets everything right. Expedite the process by marking as valid the messages Ella misplaces, but it will move them into your Inbox, not into the folder your rule designates. Moving forward,

it should apply the rule. However, there's no real need to do this, as Ella should teach itself to apply your rules.

Ella's documentation is spotty, but it's pretty easy to use, so this isn't a hindrance. There's an online demo when you register during installation and an online Help page but no Help utility and few program preferences or settings.

Ella does what it does well, but it may take some time to complete training (and you may need to help). One bonus for Outlook users is you can run Ella, gratis, as long as you wish. (After 10 days, Open Field will add an ad to messages.) ❚❚

BY JENNIFER FARWELL

Graphics Utilities

Tell Your Story In Pictures

Photo Story 3

Free
Microsoft
(800) 426-9400
www.microsoft.com

Scorecard

Performance 4
Ease Of Use 5
Installation 3
Documentation 4
Price 5
Overall Score 4.2/5

With its stranglehold over so many aspects of personal computing, many people don't like to sing Microsoft's praises, but the company does some things extremely well. One of these is Photo Story, a slideshow-creation program that turns digital images into stories for family and friends.

Photo Story is part of Microsoft's Genuine Advantage program, so to run it, you must install a validation applet that lets Microsoft inspect your system for pirated Windows software. The applet won't hurt your system or affect performance, and it makes you eligible for a range of cool freebies, one of which is Photo Story 3.

With Photo Story 3, you click and select the images you want to include; drag and drop them into proper order; and add narration (microphone required), noncopyrighted background music, and/or captions.

Enhance the images with special effects, such as sepia tones and watercolor styling.

Photo Story 3 lets you perform basic edits. Furthermore, if your images are not cropped to the same proportion, Photo Story will alert you and auto-crop them or let you adjust them yourself. Photo Story also automatically adjusts the sizing and resolution of images, so they all appear the same size onscreen.

By default, Photo Story 3 saves files in WP3 format, its native format. However, it can also save files in formats suitable for email transmission or playback on a Pocket PC or smartphone (equipped with Windows Media Player 10 Mobile), a Windows Portable Media Center, or any player that supports WMV (Windows Media Video) files. Photo Story lacks extras such as the ability to add fancy borders, but if you want a basic—and free—slideshow program, it's an excellent choice. ❚❚

BY JENNIFER FARWELL

Outdoor Habitats

3D Home Architect Landscape Design Deluxe 8 vs. Better Homes And Gardens Landscaping And Deck Designer
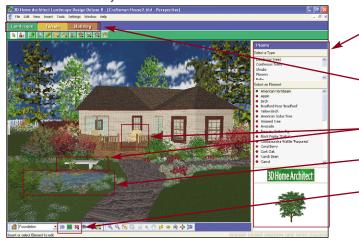
Compiled by Jennifer Johnson

As winter draws to a close, it's time to start thinking about your decorating plans for spring and summer. But we're not talking about the color you've chosen for your living room walls. Instead, we're talking about your landscaping. Consider using a program to ease the process of designing your outdoor retreat. Two options are 3D Home Architect Landscape Design Deluxe 8 ($29.99; www.encoreusa.com) and Better Homes And Gardens Landscaping And Deck Designer ($59; www.homedesignersoftware.com). Both programs offer a variety of plants, fences, and other materials to help you design the perfect space. In addition, each program has a feature that lets you generate a materials list to take to your local garden center.

3D Home Architect

Your Outdoor Sanctuary

Choose a variety of plants and trees to incorporate into your landscape using the Catalog Panel.
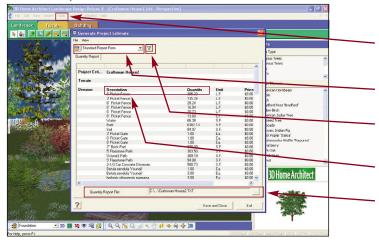
Use the Toolbar tabs to select the tools you need to create a landscape plan, change the topography of your lot, or build a structure.

Outdoor furniture lets you add the final touches to your model.

Incorporate a water feature, such as a pond, into your design.

See your design from a different perspective with 2D and 3D viewing options.

Track Your Expenses

Access the Project Estimator from the Tools menu by selecting the Calculate/Estimate option.

Choose a different format for your project estimate.

Filter your estimate to include or exclude certain parts of your design.
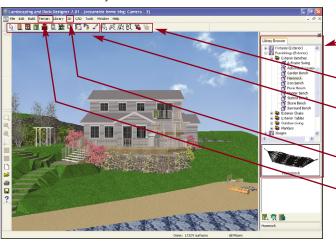
View the description and quantity of each item needed.

Select a location to save your project estimate to a file.

Better Homes And Gardens

Your Outdoor Sanctuary

The Library Browser gives you access to plants and furniture you can incorporate into your design.
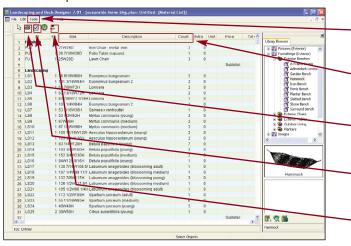
Select different angles to view all of the aspects of your design.

Get one-click access to basic shortcuts that let you create structures and format objects.

Generate a 3D view of your design using the 3D menu.

The Terrain Tools let you customize your design to match the contours of your space.

Track Your Expenses

Generate a list of all the materials you'll need to implement your design using the Materials List option from the Tools menu.

The Materials List gives you the size, description, and count of the items you'll need.

Print a list of items you'll need before you head out to the garden store.

Change the Display Options to include or exclude sections from your list.

Export your materials list to a file for printing or emailing.

IMPULSE /\/ ITEMS

Cool Stuff For $25 Or Less

Compiled by Joshua Gulick

See it, like it, buy it. Impulse Items are products that quicken your pulse and capture your attention but won't make you dig too deep into your wallet. Check these pages each month for the latest interesting and inexpensive computing items we've run across.

GREEN FIELDS 3D SCREENSAVER 1.0
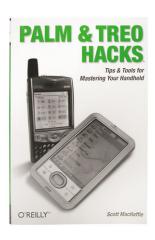
When Microsoft released Windows XP, the OS (operating system) wowed us all with its picturesque Bliss Desktop, which depicted a grassy field, a deep blue sky, and fluffy clouds. If you ever wished you could run across such a field, you're in for a treat. Rixane Software's Green Fields 3D Screensaver (www.rixane.com) features a similar setting, complete with grass, sky, clouds, and mountains. The difference is that as a screen saver, it moves. The screen saver's "camera" moves through the field, turning occasionally, so you can see distant mountains and clouds. Green Fields requires a 32MB video card (or better) and supports Win98/Me/2000/XP/2003. Try this unusually fun screen saver free or buy it for $17.95.

"PALM & TREO HACKS"

Although many people refer to malicious users as hackers, computer experts use it to refer to people who create (or hack) fixes for problems. With "Palm & Treo Hacks" ($24.95; www.oreilly .com), Scott MacHaffie offers Palm-based PDA (personal digital assistant) users a variety of useful hacks. You've got the wrong idea if you're thinking only of hacks that change your PDA—this book shows you how to handle everyday problems and meet your goals by using your PDA effectively. For example, one of the hacks shows you how to keep track of your diet. The book has several easy hacks and some complex tricks, but you'll find that MacHaffie won't lose you, even if you are new to PDAs.

PERFORMANCETEST 6

Is your computer running more slowly than normal? If you used benchmarking software to test your PC back when it was in its prime, you could run the test again to see if it's still performing well. If you haven't bought a benchmark program, now's your chance: PassMark software's PerformanceTest benchmark program runs a series of tests to determine whether your components (such as the processor and the video card) are performing well. The easy-to-use program has color performance reports that let you quickly see how your PC is performing, even if you're not very familiar with your computer's internal parts. PerformanceTest requires 64MB of memory, DirectX 9.0 (you can download the latest version free from www.microsoft.com/windows/directx), and Win98/Me/2000/XP/2003. Try the benchmark free or buy it for $24 (www.passmark.com).

SILICONE SKINS

The first iPod (www
.apple.com) was small, but
the iPods available now are
truly tiny. If you have the
latest version of Apple's
famous portable music play-
er, the iPod nano, you'll like
LASERline's Silicone Skin
For iPod Nano ($14.99; www
.laserline.com). The soft,
transparent skin protects
most of your player (includ-
ing the touchpad) from light
scratches. It doesn't cover
the nano's screen, but you
already have screen protec-
tors for the sensitive nano,
right? We noticed that the
skin has extra silicone sup-
port around the nano's head-
phone jack, which means you
won't easily wear out the
resilient skin. LASERline offers
the skins individually in Baby
Pink, Icy Blue, Midnight
Black, and Pearly White, but
you'll need to spring for the
$19.99 two-pack if you favor
green or purple.

OXYRIDE EXTREME POWER BATTERIES

Thanks to digital photos and flash memory, pho-
tographers can store many times more photos in a
digital camera than they could on a roll of film.
Although the 35mm camera is clearly headed
toward extinction, it still boasts one benefit over digi-
tal cameras—it lasts longer on smaller batteries.
Digital cameras are power hogs that seem to drain your
last batteries right before you take what would have
been the best picture of your vacation. With its Oxyride Extreme Power Batteries
(www.panasonic.com), Panasonic hasn't solved the battery problem completely, but it's
taken a step in the right direction. The batteries last twice as long as regular Panasonic
batteries in digital cameras, which means you can carry fewer batteries on your next
trip. Buy a four-pack of AAAs for $5.99 or a two-pack of AAs for $2.99.

SMUGMUG

If you're a member of smugmug, the online
digital photo-sharing service (memberships
start at $29.95 per year; www.smugmug
.com), you can print your favorite photos
on a variety of inexpensive gifts. We've seen
photo printing services before, but we're
impressed by smugmug's unusual items:
You can add a shot to a luggage tag ($7.95),
ceramic tile ($11.95), or a set of four coasters
($19.95). Of course, smugmug also lets
members print their pics to standard gift fare, such as coffee mugs and T-shirts. Our
favorite gift is the puzzle, which is available in 30-piece and 252-piece versions.

WIPE HERE DOOR MAT

If you've used Windows for long, you're used to the
various warning message windows that
appear from time to time. We see
them so often, in fact, that we'll
follow warning window instruc-
tions—even if they aren't on a
computer screen. We're not alone
in this situation, so Computer
Gear offers a doormat that has the
familiar Windows pop-up box and
exclamation point, along with the
message Wipe Feet On Doormat To
Continue . . . ($19.99; www.computer
gear.com). Put this mat in front of your door and see how many of your
geek friends wipe their feet on the Continue button.

Join Newsgroups With Outlook Express

In PC parlance, the word "newsgroup" is a bit of a misnomer. A **newsgroup** is an online discussion group focused on a particular topic. Because there are tens of thousands of newsgroups, together they cover just about every topic under the sun. And because most are frequented by gregarious experts who delight in answering the most vexing questions you can devise, the right newsgroup can be an indispensable resource for solving your toughest problems.

Of course, newsgroups aren't some sort of cyber-utopia. The language is uncensored and can get rough; even the names of some newsgroups aren't for the faint of heart. And not all newsgroup participants are helpful and courteous. Some, in fact, contribute nothing but vile verbal attacks on others who unwittingly ask a silly question or breach newsgroup etiquette (more on that later).

If you decide newsgroup plusses outweigh their minuses, you can use software you already own—Outlook Express—to find, explore, and participate in the newsgroups that interest you most.

Connect To A Newsgroup Server

To start using newsgroups, you first need to find a newsgroup server. It's highly likely that your **ISP** (Internet service provider), the company from which you get your Internet access, has its own newsgroup server you can connect to at no additional charge. To find out if your ISP has a newsgroup server, visit your ISP's Web site or call its customer service line. In the unlikely event that your ISP doesn't have a newsgroup server, you can subscribe to a newsgroup server for prices as low as $6 per month: Just type **newsgroup servers** into Google (www.google.com) or Yahoo! (www.yahoo.com) for a long list of providers.
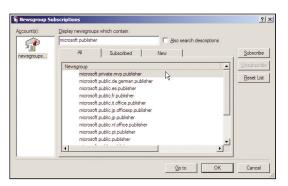
Get the address for your newsgroup server (typically something such as newsgroups.*ispname*.net). Then start

With a couple of carefully chosen keywords, you can quickly filter tens of thousands of downloaded newsgroups to the few that match your interest.

Outlook Express. Choose Tools and Accounts, select the News tab, and click the Add button. Or, if Outlook Express displays its Welcome page at startup, just click Set Up A Newsgroup Account.

When the Internet Connection Wizard appears, enter the name you want to appear in your newsgroup postings—this can be your real name or a nickname—and click Next. Type the address you'd like people to use when they contact you via email (which they will do when they want to send a message to you alone, so the rest of the group can't see it) and click Next. Enter the name of your newsgroup server; if your newsgroup server requires you to log on using a username and password—and most will—select the box below and click Next. In the Account Name and Password fields, insert the appropriate information. In the unlikely event that your provider requires secure password authentication, select the corresponding box below. Click Next and then Finish.

A box should appear and ask if you'd like to download newsgroup servers from the account you just created; click Yes. As the dialog box warns, downloading all the available newsgroups—there are tens of thousands of them—takes a little time, so be patient.

Find, Subscribe & Start Reading

When Outlook Express finishes downloading all the newsgroups, the Newsgroups Subscriptions dialog box appears, listing every single one of those newsgroups on the All tab. Find the groups that focus on topics that interest you. In the Display Newsgroups Which Contain box, enter (in lower case) one or two keywords related to your topic of interest. (The search is case-sensitive, and because all newsgroup names are in lower case, keywords in upper case will yield no results.) For example, to find newsgroups for Microsoft Publisher, we typed **microsoft**

publisher. After you enter the keywords, the All list displays a short list of groups meeting your criteria.

Scan the list for newsgroups to which you'd like to subscribe. (You can always unsubscribe from any newsgroup you don't like.) You can rule out some lists by name. For example, because we don't speak Japanese, German, Spanish, French, Italian, or Dutch, we were able to rule out the groups containing the initials jp, de, es, fr, it, and nl. And because we're not programmers, we were able to rule out microsoft.public.publisher.programming and so on. To subscribe to a newsgroup, select it and click Subscribe; an icon will appear next to that newsgroup. Repeat for each newsgroup to which you want to subscribe and then click OK. Your newsgroup server and newsgroups appear in Outlook Express' Folders list.

To start browsing a newsgroup, click its name in the folder list. In a second or two, the right pane will fill with the most recent 300 **headers**, or original posts, in the newsgroup list. (If you want to load more or fewer headers, choose Tools and Options, click the Read tab, and under News, set Get To A Higher Or Lower Number, and click OK.) Headers with a plus sign (+) next to them indicate a thread of responses beneath; click it to expand and view the thread. To read any post, double-click it just as you would an email, and the post appears in its own window. (We recommend against using the Preview pane when browsing newsgroup posts because it requires you to click a link before viewing the post, which defeats the purpose and convenience of a preview. If your Preview pane is open, choose View and then Layout, deselect Show Preview Pane, and click OK.)
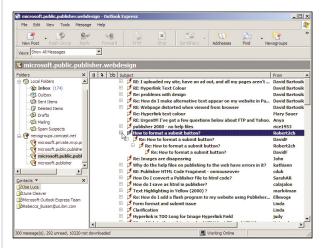
Once you open the first post in a thread, you can save yourself a lot of clicking and a litter of open windows by using the Next and Previous buttons to navigate to the next and previous messages, respectively.

Ready To Post . . . Almost

Once you start perusing posts in a thread, you'll probably have the urge to respond with your own wisdom or your own questions. Resist the urge. One of the cardinal rules of newsgroup etiquette is that one should not ask a question that someone else has already asked, especially if someone has answered that question. When you first subscribe to a newsgroup, it's best to read all the posts thoroughly before making a post or reply of your own. To be extra sure that your question hasn't been answered, you may want to run a quick search over the postings you've downloaded: Click the arrow next to the Find button, choose Message In This Folder, enter appropriate keywords, check Search All Text In All Downloaded Messages, and click Find Next.

Outlook Express will highlight the first post it finds containing your keywords; press F3 to go to each successive post containing the keywords.

To be even more thorough—and to avoid getting anyone's dander up with your first post—you can take the extra step of searching the entire newsgroup, beyond what you've downloaded. A great tool for doing this is Google Groups, a free service that, though still in the beta test phase, has pretty much become a staple for newsgroupies. To use it, surf to groups.google.com/advanced _search. In the With All Of The Words field, enter your keywords, set the adjacent drop-down to 50 or 100 messages, and in the Group box, enter the name of your newsgroup and click Google Search. Google will return all the posts that contain your keywords, and you can click to see if your question has already been answered.

Once you've subscribed to your newsgroups, choose any one from Outlook Express' folder list (left pane); click the plus sign (+) next to any header posting to reveal all the replies in the thread.

When you are ready to post, you have three choices. To introduce a new discussion header, click the New Post button, enter a subject, enter your message, and click Send. To reply to a post with another post, first open the post, click Reply Group, enter your reply, and click Send. To send a private reply to the author of the post, click Reply. A warning box will appear because you're trying to access Outlook Express' email functionality, something a virus might try to do; check Allow Access For, choose a time, and click Yes. Type your response and click Send.

So long as you're considerate of fellow newsgroupies' time and feelings—and have a thick enough skin to ignore the few who aren't—you'll find your newsgroups to be some of the best sources of information online. ▌▌

BY MARK SCAPICCHIO

Schedule Tasks In Windows Me

Included with Windows Me is a utility called the Task Scheduler, which is designed to run applications for you at specified intervals. The Task Scheduler automatically launches with the operating system and runs in the background. You can access it via the Control Panel.

A handy use of Task Scheduler is to automate system utilities, such as ScanDisk, Disk Defragmenter, or Disk Cleanup, you should regularly run, but which many people often overlook. Drive utilities aren't the only programs you can schedule, though: You can use Task Scheduler with executable files (those with an .EXE or .COM extension), batch files (BAT), any registered data files (such as a DOC file, provided Microsoft Word is installed), and for advanced users, scripts written in JavaScript or Visual Basic Script (JS and VBS files, respectively). In fact, third-party applications and utilities often use the Task Scheduler to schedule their own tasks.

Schedule Tasks

Create a new scheduled task by clicking the Add Scheduled Task icon within the Task Scheduler folder, which will bring up the Scheduled Task Wizard. After you click Next, you're presented with a list of all the applications installed on your system. When you highlight one and click Next, you'll be asked to give the task a name. Give it the most descriptive label possible as it will be easier to identify the task later.

Below the task name is an area where you specify when the task should run. You can schedule it to occur based on a calendar or system event. There's also an option to have a task run once. Make a selection and click Next, and if you've chosen a calendar-based schedule, you'll be prompted to enter the day, week, or month, as well as a time of day, you want the task to run. There's enough flexibility to let you run tasks on variable or irregular schedules.

Advanced Scheduling Options

So far, you've used the wizard to specify the what and when of a task. You can also indicate the how by

After you use the wizard to select a task and decide when it should run, use the advanced options to specify how it should run.

configuring a task's advanced options. Click Next and place a check mark next to Open Advanced Properties For This Task When I Click Finish. Click Finish.

For tasks that are drive-specific, such as ScanDisk or Disk Defragmenter, click the Settings button on the Task tab to specify the particular drive to which you want the task to apply. To prevent a task from executing, remove the check mark next to Enabled. (It won't run again until you re-enable it.) Use the Schedule tab to modify a task's schedule or create additional scheduled instances.

Modifying the Settings tab can help keep your list of tasks up-to-date by having a task delete itself after it's not scheduled to run anymore. You can also specify whether a task should terminate automatically after it's been running for a certain length of time. You can also tweak a task here to take Power Management settings into account. It would be not be ideal, for example, if a defrag task started when a system was running on battery power. This could quickly drain the battery, perhaps even before the task was finished (and you don't want to lose power in the middle of a defrag). To avoid this sort of problem, specify that a task not start when a system is running on batteries or terminate if a system switches to battery power while the task is in progress.

Limitations

Although the Task Scheduler in each version of Windows is similar, only the Win2000/XP versions let you assign permissions to a task. As such, in Win98/Me, anyone with access to the system can create, delete, or modify tasks.

The Task Scheduler is designed to work with automated applications, not those that require user interaction, so any application that prompts the user will simply halt while waiting for a response.

Finally, the system must be running for tasks to execute. If a system is turned off when a task is due to run, it will run at its next scheduled time the computer is on. Missed tasks will not automatically run the next time the system is started. ▮▮

BY JOSEPH MORAN

Time For A Chat?

Finding the computing answers you need can be an intimidating, daunting task. But SmartComputing.com provides you with informal, easy-to-use chat rooms where you can discuss everything from computer quandaries to the latest issue of *Smart Computing.* Don't forget to check out the Frequently Asked Questions section and Rules Of The Board. The busiest times for chat rooms usually start around 7 p.m. CST. Getting started is easy—here's how:

After logging in, click the Computing Chat Room link on the left side of the home page.

Read the Frequently Asked Questions and Rules Of The Board at the top of the page.

There are six rooms to choose from; rooms with people are noted with the number of users in parentheses next to the room number.

Click the numbered chat room link you wish to enter.

You'll see a list of current chat users on the right, in different colors, and the conversation in the main screen on the left.
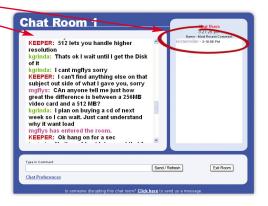
To change the way messages display, the screen refresh rate, and the font size, click the Chat Preferences link. Select your preferences and click Save.

Join the conversation by entering a comment in the Type In Comment box and clicking the Send/Refresh button.

When you're finished chatting, click Exit Room.

Nanowire Makes Every Spark Count

Good Things *Do* Come In Small Packages

Oftentimes, super-sizing is preferable; this is certainly true for those wanting bigger pieces of cake, larger paychecks, more square footage, and additional leg room on an airplane. But then there are other occasions when smaller is preferable, as in smaller waistlines, MP3 players, gas bills, and number of golf strokes. Really, why would you drive that big boat of a Cadillac when you could tool around in a svelte MINI Cooper?

Nanowire is a solid member of the smaller-is-better camp. This technology falls into the category of **nanotechnology**, which is the process of creating objects at a molecular or atomic level. In other words, anything nano-related (**nano**, meaning one-billionth [10^{-9}]) is incredibly small. The beauty of nanowire is that it allows for a much lower current to flow through it when compared to metal. Nanowire is made of

As An Aid In The Medical Field

1. Nanowires make up a small chip, which serves as a sensor.

2. Antibodies for certain types of proteins or markers for specific diseases are attached to the nanowires in the chip. The specific antibody, of course, depends on each specific disease. In the case of cancer, for example, an antibody for brain cancer differs from that for lung cancer. Researchers are developing ways to include various antibodies, so they can begin testing for numerous diseases or genetic conditions.

nanotubes, which are carbon molecules resembling chicken wire and are one or two nanometers in diameter and about 1mm long.
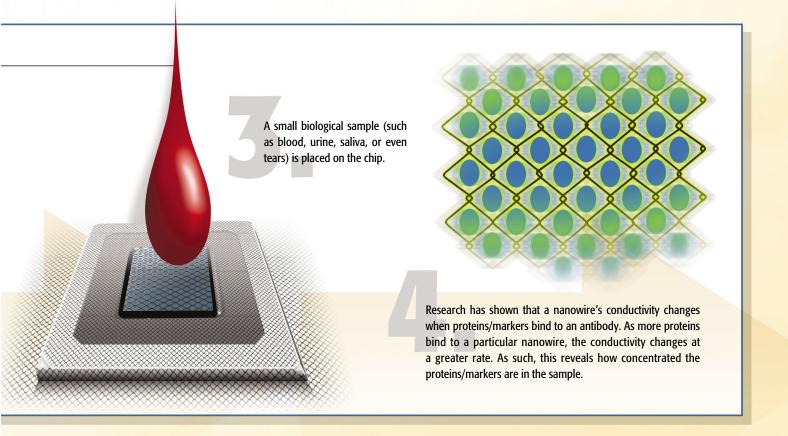
Nanotubes were accidentally discovered in 1990 by NEC scientists while making **buckyballs** (molecules composed of 60 carbon atoms). Nanotubes have a tensile strength that's 10 times greater than steel but are only one-quarter of steel's weight, and as such, they are the strongest known material for their weight.
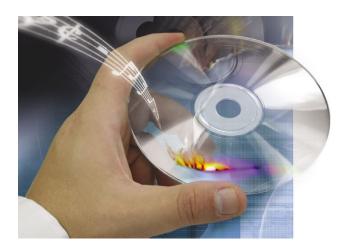
Another reason nanowire is so highly touted is because of its potential to continue Moore's Law, which states that the number of transistors and resistors—and as a result, the computing power—on a chip will double every 18 months to two years. Silicon's abilities can be stretched only so far, and when its breaking point is reached, nanowire is a likely candidate to take silicon's place.

Nanowire doesn't occur in nature, and there are two ways to create it in the lab: suspended and deposited. The former involves holding up the ends of the wire in a vacuum and then chemically etching it to the appropriate diameter, while the latter means fabricating it on a nonconducting surface such as plastic or glass.

In addition to the aforementioned use in chips, researchers envision many other uses for nanowire, including several within the medical field. For example, no one relishes the thought of blood work and having to wait days or weeks for results, but lab technicians can now use nanowire to detect certain types of diseases and genetic mutations, such as cancer or cystic fibrosis, with a minimal amount of blood and find out the results in minutes. As well as being less invasive, the cost comparative to current methods, especially those for DNA-related tests, is far lower. In addition to this diagnostic capability, scientists are researching methods that would enable the dispensation of medication at a molecular level. For instance, in the case of cancer, scientists are looking for ways to apply chemotherapy medication directly to the affected cells. ❚❚

3. A small biological sample (such as blood, urine, saliva, or even tears) is placed on the chip.

4. Research has shown that a nanowire's conductivity changes when proteins/markers bind to an antibody. As more proteins bind to a particular nanowire, the conductivity changes at a greater rate. As such, this reveals how concentrated the proteins/markers are in the sample.

It's Not Final 'Til It's . . . Well, Finalized

Finish Your CD/DVD Burn

Sometimes media players and burning software aren't quite truthful with us—such as when they tell us that a CD was successfully burned, but then we find out that a player won't play the newly burned disc.

The problem could be in your choice of discs. (See our "The Recordable vs. Rewriteable Conundrum" sidebar.) Or it may be because the software didn't *finalize* the burn, which is an essential step to recording to a disc. We'll explain how to make sure neither issue becomes a problem when you burn a CD or DVD.

What Is Finalization?

When a burner finalizes a disc, it means you can't add to it or rearrange the content. Part of the finalization process, depending on the media player or burner you use, is the writing of a table of contents to the disc, which a player needs in order to play the disc. Some media players and burning software give you the option of finalizing the disc, but others, such as Windows Media Player 10, do it automatically.

Of course, if your player lets you burn in multiple sessions and if you plan to burn more content to the disc later, you shouldn't finalize it yet. But at some point in the burning process, you will have to finalize the disc before you can play it in a CD or DVD player. There is one exception, though: Even if you finalize a rewriteable disc, you can erase its content and burn to it again.

We burned discs using three popular applications: WMP10 (free; www.microsoft.com/windows/windowsmedia/mp10), RealPlayer 10.5 (free; www.real.com), and Nero 7 Ultra Edition ($99.99 package, $79.99 download; ww2.nero.com/nero7/enu/Products.html). The process of finalizing a disc varies from player to player and program to program, but our steps should give you a general idea of how to accomplish this step, regardless of your hardware and software.

Windows Media Player 10

Don't try to "finalize" discs with WMP. It uses the term "close" instead, and it doesn't give you the option *not* to close a disc because WMP automatically performs this function whenever you burn music CDs. WMP completes a three-step process during a burn: It converts files, if necessary; it burns them; and it closes them. You can monitor the stages by keeping an eye on the bottom of the Burn tab.

We successfully burned tracks to a CD-RW (CD-rewriteable), and although we couldn't play the disc on all of our CD players, especially our older ones, that wasn't WMP's fault; many older CD players simply can't play CD-RWs, even ones that have been created correctly.

However, it was easy to use WMP10 to erase the music files on our CD-RW. To make a clean sweep, just click the Erase Disk button (that's the one on the far right) on the Burn tab.

RealPlayer 10.5

Burning options in RealPlayer are determined by what version you have. The free version does a nice job; we burned a music CD at a speed of 24X in less than five minutes onto a 48X CD-R (CD-recordable).

Burning with RealPlayer is a three-step process. First, it creates a table of contents. Second, it burns the tracks. And third, it finalizes the disc, which takes just a few seconds. With the free version, finalization is automatic, so you can't choose to skip this step until later. But members of Real Service and those who have purchased RealPlayer

Don't try to burn at a faster rate than the disc allows, regardless of your burner's capabilities.

Plus can choose to burn a CD in multiple sessions. If you fit into one of those categories and select the multiple-session option, you'll need to make sure you complete the finalization step before you can play the disc. If you burn to a CD-RW, you can erase the disc by choosing that command from the Additional CD Tasks list.

Nero 7 Ultra Edition

Nero 7 Ultra is a good CD- and DVD-burning suite, but finalizing discs depends on what tool you use. For instance, if you use Nero StartSmart to access shortcuts you can use to make an audio CD, you won't have the opportunity to activate or deactivate the finalization step because Nero will finalize the CD for you by default. If, however, you open Nero Burning ROM 7 to burn a CD, you have many options, including recording the disc in multiple sessions. The Burn tab in this section also has the finalization setting.

We burned eight tracks onto a CD-R via StartSmart shortcuts and found that Nero did indeed finalize the CD, which we played in several types of players.

Helpful Hints

Regardless of which player you use to burn a disc, you should follow these tips for the best results.

Use brand-name discs. Brand-name discs may cost a bit more than generic ones, but you'll compensate for the higher price tag by buying quality. That said, some older players may not play certain disc brands. Many disc-burning enthusiasts will tell you that they experimented with a variety of brands and speeds before they found what works best with their burner and players.

At the same time, it isn't necessary to purchase blank CD-Rs that are labeled "music" when you want to create an audio CD; regular CD-Rs work just fine for burning music files.

Shut down other functions. As you might expect, it's a good idea to close other programs when burning a disc. Granted, an app such as Microsoft Word shouldn't affect a burn session, but ideally, you shouldn't run anything else until the burn session ends.

In addition, turn off your screen saver. Right-click your Desktop, choose Properties, and click the Screen Saver tab. Under Screen Saver, choose None from the drop-down menu, click Apply and OK. Also, turn off your optical drive's autoplay function. Open My Computer, right-click the optical drive icon, choose Properties, and click the AutoPlay tab. Select Blank CD or DVD Movie from the top drop-down menu, select the Prompt Me Each Time To Choose An Action radio button, and click Apply and OK.

Burn at a slower rate. Your optical drive's burn speed can cause problems if you try to burn at a rate that's faster than the disc allows. In addition, even if your blank discs and burner can record at fast speeds, you might find that burning at such a high speed leads to buffer underrun problems, which is a common mistake when burning discs. (A **buffer underrun** occurs when the flow of data from the source—such as your hard drive—to the buffer in your optical drive is interrupted, thereby allowing the buffer to be emptied. When this happens, writing to the disc stops.) Too many buffer underruns can render a disc unreadable to players.

A media player may give you the option of enabling underrun protection or have it set as the default. Selecting that option or setting won't completely eliminate the possibility that an underrun might occur, but it will allow the burner to "link" data across the small gaps on the disc that are created by a buffer underrun. Your best bet is to set your burner's burn speed to a slower setting. You can do this either by adjusting your media player's settings or by opening the drive's Properties (as we mentioned previously in this article) and choosing the appropriate settings on the Recording tab (followed by clicking Apply and OK).

To Tell The Truth

If you follow these steps, as well as the ones your media player outlines, you shouldn't have any problems burning discs that do, in fact, work with your CD and DVD players. And when that happens, you can be sure that your media player or burning software is telling the truth when it says the burn was successful. ▮▮

BY RACHEL DEROWITSCH

The Recordable vs. Rewriteable Conundrum

We need to clear up any confusion that may exist about the differences between CD-R/DVD-R (recordable) and DVD-RW/CD-RW (rewriteable) discs.

You can burn music tracks or video to a CD-R/DVD-R only once (unless your media player or burning software lets you record in multiple sessions). You can't erase the content on a CD-R/DVD-R, and you can't add content to it later once it's finalized. On the other hand, DVD-RW/CD-RW media can be burned, erased, and recorded to again.

But CD-Rs/DVD-Rs are more universally accepted. For example, you'll find that even if you successfully burn to a CD-RW and finalize it correctly, that still doesn't mean that all CD players will recognize it, especially the older players.

If you've never burned discs before, make sure you know what kind of CD/DVD burner you have before you purchase blank discs. Look on the outside of the drive/burner for a label or logo, and you should see the words, "Compact Disc ReWritable," or something similar. If your burner has a label such as this, you can burn to both CD-R and CD-RW media. Similarly, you can look for a label such as "DVD Multi Recorder," which indicates you can burn to DVD-R (general, not authoring), DVD-RW, and type II DVD-RAM media. ▮

Vista Sneak Peek

There's A Lot To Look Forward To In Microsoft's Next OS

Microsoft outdid itself with Windows XP. It's extremely stable; it's compatible with a staggering array of hardware and software; and it's incredibly easy to use compared to previous versions of Windows. WinXP is great, but for something as essential as an OS (operating system), great isn't good enough. WinXP has some glaring security issues, and it looks dated compared to the latest OS releases from Apple. Also, it wasn't developed at a time when home networks and broadband Internet connections were practically ubiquitous, and it shows.

The solution to all these problems—as far as Microsoft is concerned—is Windows Vista. We looked at the Beta 1 version of this upcoming OS, and even though it doesn't look much more advanced than WinXP at first glance, there's a lot more going on under the hood than you might think. Although the final feature set for the OS won't be complete until Vista is released in late 2006, here are some highlights we guarantee you can look forward to.
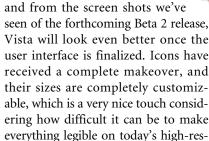
Interface Makeover

The first thing you notice after booting up Vista is its sleek new look. Even Beta 1 looks great thanks to the new Aero theme, and from the screen shots we've seen of the forthcoming Beta 2 release, Vista will look even better once the user interface is finalized. Icons have received a complete makeover, and their sizes are completely customizable, which is a very nice touch considering how difficult it can be to make everything legible on today's high-resolution LCDs (liquid-crystal displays).

Vista was obviously developed with multimedia in mind because it handles pictures and video files much better than WinXP does. Instead of applying a generic icon to each picture by default, Vista automatically generates thumbnail images for each picture or video and uses those for icons. These icons also are fully resizable, just like regular Vista icons, and the end result looks much better than the Thumbnail view included in WinXP. The new OS also will come with an integrated photo organization tool called Windows Photo Gallery, and the Windows Media Center feature (which wasn't available in our test version) will let users access music, movies, and other multimedia from one central location using a customized interface.

The visual overhaul extends to Computer, which replaces My Computer. Previously, opening this folder only displayed icons for hard drives,

The Vista interface is already looking good, and this is just the first beta release.

optical drives, and similar devices, but Vista gives you a complete overview of this hardware. Graphics are used to display the remaining capacity of all drives, and everything is labeled to make it easy to get a detailed overview of the hardware without having to check each piece of equipment separately.

More Control

At last, a Parental Controls entry puts essential tools for locking down a PC at parents' fingertips. You can establish a list of restricted Web sites, put time limits on computer usage, and prevent certain games or other programs from loading—all from one convenient interface. Vista also has the ability to generate Activity Reports that let you know exactly what your kids have been up to during their computer time.

Anyone with a lot of files on their hard drives knows how long it took WinXP to search for something, but Vista's search functionality has been redesigned from the ground up. Thus, it's easy to search for certain types of files, such as pictures and documents, and the search results appear in seconds. We were able to rearrange the results in a variety of

Vista's Control Panel shows that its developers completely revamped it, but it's very easy to navigate.

ways, and once again, when pictures or videos appear in the search results, they are represented by thumbnail icons that make it very easy to find the exact file you are looking for.

Getting Online

Vista will come with a new version of Internet Explorer (see our "Internet Explorer Graduates To Version 7" sidebar), but that's no good unless you can get online easily. Fortunately, Vista has the best networking capabilities we've ever seen in a Microsoft OS. After installing Vista from scratch on a blank hard drive, we were able to immediately connect to our broadband Internet connection without having to do any network configuration at all.

And if you do find it necessary to make adjustments, the final version,

IE7, will come with a revamped Network Center.

But Wait, There's More

We've just discussed some of the major additions and enhancements that Vista will usher in for Windows users, but there are plenty of other features that should make the upgrade worthwhile.

For instance, Virtual Folders look like regular folders, but they don't actually hold files or subfolders. Instead, they contain links to any files, folders, or shortcuts you add to them, and these links are dynamically updated if the targets they point to move from their original location. For example, if

Internet Explorer Graduates To Version 7

One of the most exciting new programs being developed alongside Vista is Internet Explorer 7. The beta release we tested looks great and is packed with long-overdue features. One of these is tabbed browsing, which lets you open multiple Web pages in the same IE window and then access them by clicking tabs. This is augmented with a new Quick Tabs feature that shows thumbnail images of each tab on a single page, so you can more easily select the next page you want to view.

In the past, getting rid of cookies and other data that IE gathers as you browse the Web required either a lot of know-how or third-party applications to clean up. IE7 simplifies this process by offering a single-click option for clearing out all of this cached data at once. Microsoft also is promising that IE7 will be much more secure than IE6 and will offer built-in protection against phishing sites that pretend to be legitimate business sites in order to steal your

personal information. A new Security Status bar will appear next to the Address bar to help notify users when a site they are visiting appears to be shady.

Plus, Page Zoom is a nice new feature that automatically scales Web pages to fit inside your browser window, whatever its size may be. This functionality also extends to printing, so the program can dynamically scale Web pages to fit on a single printer page.

IE7 can even read RSS (Really Simple Syndication) feeds and let users add feeds to their Favorites list. That's a welcome addition in an age when blogs, news sites, and other sources are using RSS feeds to deliver a constant flow of fresh content to users. WinXP users should be able to access a beta version of IE7 at Microsoft's site, but it may not have all of the features that Microsoft will include in the final version it plans to release with Vista. ▮

you set up a virtual folder that points to all of your pictures and then add an extra hard drive and move all of the pictures to the new drive, the virtual folder adjusts its links automatically, so they point to the new drive. Vista comes with a variety of preconfigured virtual folders (including Albums, All Music, and All Documents), and you also are free to create your own virtual folders.

Security also is improved. Vista supports full-volume encryption, which means that all of the data on a hard drive is automatically encrypted and can only be accessed by someone who knows the proper password. This option should be terrific for laptop users, who can enable the feature and have at least some peace of mind that their precious files won't be read by others if the computer is lost or stolen.

Laptop users also can benefit from the new Sleep state. In the past, you could only choose between Standby mode, which is fast but leaves data at risk if the system loses all power, and Hibernate mode, which is slow to shut down and start up but writes all of the data to the hard drive so it isn't destroyed if power is lost. Sleep mode combines the best of both of these modes, shutting the computer down and starting it back up in seconds but writing everything to the hard drive so the data is protected.

Get Ready To Upgrade (Your Hardware)

All of this power requires some serious hardware compared to WinXP. Your computer will need at least 512MB of RAM (which, thankfully, isn't too expensive these days), and it will also need a dedicated graphics card that supports Microsoft's DirectX 9.0 technology. Many inexpensive computers sold today come with integrated video that shares system memory instead of having its own dedicated memory banks, so be prepared to upgrade your computer's video to accommodate Vista if you have one of these systems.

Microsoft also states that Vista requires "a modern, Intel Pentium- or AMD Athlon-based PC," and we're guessing it needs a processor speed of 2GHz, minimum. The Beta 1 version we tested wouldn't even boot on an older 1GHz Pentium 3 system, but it worked very well on a machine with a 2.66GHz Pentium 4 and 1GB of RAM. When Microsoft is ready to release the OS, any machine purchased in the past two years should handle Vista just fine, provided the computer has its own video card already. Now we just have to twiddle our thumbs and wait until the new OS actually ships. ▮

BY TRACY BAKER

Searching is much faster with Vista, and resizable thumbnails now represent multimedia files by default.

Better Bundled Apps

Forget about Outlook Express. Microsoft has completely revamped the essential applications that Windows typically comes with, giving them a fresh look and enhanced features. Here's a quick overview.

Windows Mail
The new Windows Mail application comes with preconfigured filters for weeding out junk mail and phishing scams. Plus, it takes full advantage of Vista's enhanced searching capabilities to quickly sort through thousands of emails.

Windows Calendar
Set up automatic alerts, rank tasks according to their priority, and share your schedule with others using this advanced calendar tool. It's also compatible with the popular iCalendar format, making it easy to post your schedule to a Web site that uses this technology.

Windows Fax & Scan
If you have a scanner or an MFD (multifunction device) with scanning capabilities, this new tool offers one-click scanning and faxing for your documents.

Windows Media Player 11
Vista's new multimedia player certainly looks sleeker than Windows Media Player 10, and it automatically downloads album art and lets you organize and search your music much more efficiently than before. Owners of PlaysForSure digital music players and other devices also can benefit from complete interoperability with WMP11.

Windows Defender
Microsoft Windows AntiSpyware, currently in open-beta testing, will get a new name—Windows Defender—and become a standard component of Vista. ▮

Is Linux Ready For Prime Time?

On The Right Path Toward Easy Street

For several years now, the Linux OS (operating system) has been popular with corporations looking for a lower-cost option (and arguably, an option with a higher reliability) than Microsoft provides for their servers. And even though Linux also has been available for desktop computers, limited driver support and an overall lack of user-friendliness have limited its appeal mainly to contrarian geeks.

Times are changing, though, and as more versions of Linux appear on Web sites and store shelves (known as **distros** or distributions), both the open-source community and Linux publishers have been making concerted efforts to improve the usability and compatibility of the OS.

As a result, Linux is starting to make greater inroads onto the desktop, which leads to the question of whether Linux has become easy enough to install and use for the typical knowledgeable—but not necessarily highly technical—user. If so, can Linux now be considered a viable alternative to Windows? And more to the point: Might dumping Windows for Linux be a practical option?

To find the answers to our questions, we took two recent and fairly popular versions of Linux—Mandriva 2006 (wwwnew.mandriva.com) and SUSE 10.0 from Novell (www.novell .com/products/suselinux)—and put them to the test on a pair of our desktop test systems. We chose systems from different ends of the

spectrum: one, a fairly high-end but generic PC of recent vintage with a 3.2GHz Pentium 4 processor and 1GB of RAM; and the other, a brand-name but older (circa 2001) system (a Compaq Presario 5000) with a 700MHz AMD Duron processor and 512MB of RAM.

Our initial plan was simple: to get each Linux distribution successfully installed on both systems with a minimum of fanfare. We then worked with the available GUIs (graphical user interfaces) to see how easy they were to navigate. In addition, we explored the software supplied with each flavor of Linux. Finally, we checked to see how well each distro provided support for our hardware devices, and then we attempted to perform a series of common tasks.

In The Beginning: Installation

Although many Linux distros (including Mandriva 2006) are available as downloads from the Web, we used the retail boxed version of each product for our tests. SUSE includes both CD and DVD media in the same box, but Mandriva makes you choose one or the other at the time of purchase.

Both Mandriva and SUSE come with fairly hefty users manuals (at least in comparison to what you get with Windows). Mandriva includes two manuals; one is a reference manual that primarily covers esoteric technical features and commands, and the other is Mandriva's 264-page starter guide that contains information about installing and configuring the OS, as well as more advanced topics. The same sort of information found in Mandriva's starter guide is what SUSE's 300-page startup manual includes. Although Mandriva's starter guide and SUSE's startup manual are informative and readable, we managed to install both OSes without having to rely on the manuals.

Because installing Mandriva and SUSE both require booting from a

disc, it's important to make sure that your system supports booting from a CD or DVD drive. On some systems (mainly older ones), a BIOS (Basic Input/ Output System) update may be necessary to enable this, and that's especially true if you have an external USB or FireWire CD/DVD drive because many systems don't recognize these devices when they boot.

Mandriva 2006

After booting with the Mandriva DVD, we were prompted to choose one of four security levels for the system, based on how it would be used. We chose Standard because Mandriva recommended this level for systems users regularly connect to the Internet. The other options are High (the default), Higher, or Paranoid.

One of the nice things about Mandriva's installation routine is that it gives you a choice of which applications to install. Its Package Group categories include Office Workstation, Game, Multimedia, and Internet—each with its own set of relevant applications, and you can choose any or all of them. Mandriva also lets you install both major Linux desktop environments—known as KDE (K Desktop Environment) and GNOME (GNU Network Object Model Environment)—and define a separate default environment for each user. (We'll discuss KDE and GNOME in more detail later in the article.)

One complaint we had about Mandriva's installation wizard was that it didn't provide a Back or Previous button, which made it impossible to revisit a configuration choice after we had made it.

After accepting Mandriva's default disk-partitioning option (which was to clean the drive and create a new single partition), the installation routine

Both Mandriva and SUSE include Kontact, a PIM (personal information manager) that's analogous to Outlook.

began copying files. The installation then proceeded without the need for any system reboots (except at the very end), and because we were installing from a DVD, no disk swapping was required.

When we selected a password for the administrator account (known in Linux as "root") and created the user accounts, Mandriva offered to connect our system to the Internet and download any available OS updates, so we selected this option, as well.

SUSE 10.0

SUSE offers three different installation modes: a default installation mode that attempts to automatically detect and configure all system

The GNOME desktop, which seems to take its cues from the Mac OS interface, launches applications from a bar at the top of the screen.

hardware, as well as two optional installation modes—ACPI Disabled and Safe Settings—which are for systems that can't complete a default installation. The regular (default) installation mode worked just fine on both of our test systems.

One mildly annoying "feature" of the SUSE installation (and one that was easy to rectify) is that the system ignores your system's date and time settings and instead sets them according to UTC (Universal Time Coordinated, also known as GMT or Greenwich Mean Time).

Compared to Mandriva, SUSE doesn't offer as much control over which applications install during the installation routine—unless you click an Expert tab that lets you modify the installation parameters (including the standard software package). SUSE also forces you to select either KDE or GNOME as your desktop environment (but not both). We chose the former and then accepted the default disk-partitioning option, which consisted of wiping the drive clean and creating a new single partition for SUSE.

Once SUSE starts copying files, it does its best to keep you informed. For instance, if you install from the CDs, SUSE tells you approximately when it'll need the next disc, so you know when to return if you decide to leave your office for a while. Over the course of the installation, the system did reboot itself one time, which created some confusion because it did so before prompting us for the second CD, causing us to wonder if the installation was starting over again; but the installation ultimately proceeded where it left off without any problems.

As the installation progresses, you'll notice that the steps it's performing appear in a list in the left margin. At any time, you can click a button to replace

that display with a context-sensitive help menu.

When the files finish the copying process, SUSE prompts you to create a root password and user accounts, and then like Mandriva, SUSE issues you a warning if you use weak passwords (such as one with only letters). Before completing the installation, SUSE offers to check the Internet for any OS updates that are available to download. You can let SUSE download all available updates or choose only specific updates. Plus, you can now configure the appropriate settings for receiving automatic updates in the future.
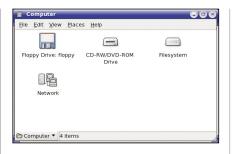
Face The Interfaces

So far, so good. Overall, neither Mandriva nor SUSE caused any great mayhem during the installation process. There is a caveat, though: Although we installed both Linux distros on "clean" systems, Mandriva and SUSE claimed to be able to resize an existing Windows partition for the purpose of dual-booting a Windows/Linux system. We didn't put those claims to the test, but both distros strongly recommend that a user run ScanDisk and Disk Defragmenter and then back up their data before resizing a partition.

Now it's time to consider the interface you'll use. Although we installed both the KDE and GNOME environments with Mandriva 2006, we chose to work primarily with the latter interface. For the most part, KDE and GNOME are intuitive enough that most people will find it easy to perform such basic tasks as launching applications or files, but there are some

Forget about drive letters; in Linux, devices are explicitly identified by name and type.

issues that take some getting used to, as well.

For example, Linux doesn't use drive letters to identify storage devices. So, instead of accessing Drive A: (or C:, D:, etc.), you'll access your floppy diskette, hard drive, and optical drive by name. In addition, KDE and GNOME don't always make it obvious as to how to customize specific OS settings, and that can lead to more frustration.

GNOME. One thing you'll likely notice about GNOME is its strong similarity to the Mac OS interface. For example, the focal point of GNOME is at the top rather than at the bottom of the screen. Three dropdown menus give you access to applications, storage devices, and various configuration utilities.

GNOME's menu bar (known as the Panel) provides quick launch icons for oft-used applications, and the desktop itself offers shortcut icons to the user's home folder and system

Konqueror, KDE desktop's file manager, is similar to Windows Explorer.

storage devices (as well as a trash can). To help keep desktop clutter to a minimum, GNOME offers four virtual desktops you can use to organize your open windows; you can quickly switch among them using buttons in the lower-right corner of the screen.

KDE. If you consider that GNOME takes its cues from the Mac OS, then KDE seems clearly inspired by Windows. In fact, the KDE and Windows interfaces are so similar that most Windows users should be able to find their way around quickly.
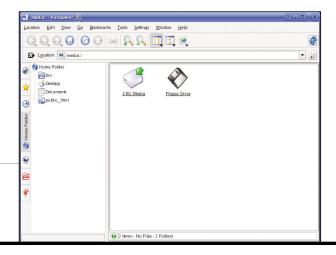
KDE's version of the Start menu is called the Main Menu, and it, too, resides in the lower-left corner of its desktop. From here, you can browse and launch applications (including recently accessed ones), use configuration utilities, execute commands, and log off or shut down the system. There's also a Toolbar that's more or less analogous to Windows' Taskbar, from which you can switch among running programs and access shortcuts to oft-used applications. In addition, you can use the Toolbar to switch between two virtual desktops or slide it out of the way to reclaim more space.

A Computer icon on the desktop displays Konqueror, KDE's file management tool, which operates similarly to its Windows counterpart, Explorer. Konqueror lets you browse the contents of your hard drive and other storage devices, as well as use the trash icon on the desktop for housekeeping chores.

Bundled Applications

Both Mandriva and SUSE include more software than you can shake a proverbial stick at. For starters, you get all of the same types of minor utilities that Windows offers, including multimedia utilities, graphics tools, and games. Beyond that, Mandriva and SUSE also provide a slew of productivity and connectivity options. You'll also

notice that many of the same applications are present on both OSes.

For example, both Linux versions ship with OpenOffice.org, an excellent office productivity suite that comes with similar components to Microsoft Office, including word processing, spreadsheet, presentation, database, and drawing tools. There's also a separate email client/PIM (personal information manager) called Kontact that's analogous to Microsoft's Outlook. Other applications found in both Mandriva and SUSE include RealPlayer 10 and Adobe's PDF (Portable Document Format) Reader.

If you don't mind learning to use new applications for typical chores such as word processing, email, and Web browsing, you'll probably be as happy with Linux as you are with Windows. Mandriva and SUSE also give users multiple applications to choose from for a given task. To cite just one example, SUSE offers several different Web browsers, including Opera and Mozilla's Firefox. There are also several free or inexpensive third-party Linux apps available.

But it's important to remember that Windows applications don't run on Linux, and many Windows apps don't have Linux counterparts. Therefore, even though a Microsoft Office user can probably switch to OpenOffice.org without suffering many ill effects, a user of Quicken, for example, won't have a similar Linux option and may want to stick with Windows on at least one system.

(*NOTE: There is software available to emulate Windows on Linux, but it can be expensive, and it doesn't offer any guarantees that it will work properly with a given application.*)

Usability & Device Support

The issue of hardware support will probably still represent the greatest obstacle to using Linux for most users. When this issue came up during our tests, our results were very inconsistent. Both SUSE and Mandriva did recognize the majority of the basic hardware on both of our test systems, including such devices as graphics cards, NICs (network interface cards), optical drives, sound cards, and others. But neither distro would work with the more specialized peripherals attached to our generic test system, including the scanner, a Web cam, and a graphics tablet.

Are you doing a double-take? Yes, the KDE desktop looks and acts a lot like Windows XP's Desktop.

Printer support also varied. For example, SUSE was unable to print to an Epson Stylus 825 on our generic test system, but on the older Compaq machine with an Epson Stylus CX3200, SUSE printed just fine. By contrast, Mandriva printed OK with both systems and printers we tested. A somewhat related problem was that the CX3200 is an MFD (multifunction device) that includes a scanner, and both distros refused to recognize the scanner portion of the MFD.

But even when a particular device was recognized and ostensibly configured correctly, that didn't always mean the device could perform all given tasks. For example, although both Mandriva and SUSE were able to read data DVDs, we kept receiving error messages whenever we tried to play movie DVDs. (SUSE's utility reported that it was unable to play copyrighted material, whereas Mandriva's app presented a generic error message.) Similarly, we had trouble going online with SUSE on one of our systems, even though there was no apparent problem with the NIC's configuration.

Thus, it's a good idea to check the Web site of a Linux distro's publisher to verify the product's system requirements and support for specific devices prior to purchasing a certain distro. However, there's often no way to know how a particular device will work with a Linux distro until you try it.

A Contender, But Not Yet A Prime-Time Contender

Based on our experiences with Mandriva 2006 and SUSE 10.0, we agree that Linux has evolved greatly. To their credit, both of the distros we tested have polished installation routines that didn't require us to consult their manuals (though we did need to periodically check the manuals as we used the OSes). Still, we don't believe Linux has improved quite enough to be realistically considered by the average nontechnical user.

Even so, Mandriva or SUSE may be a good choice for a second or third machine used to perform basic tasks with the bundled software, as long as it's a computer that doesn't have any out-of-the-ordinary hardware. But dumping Windows from a primary or single system in favor of either of these Linux distros will likely cause much frustration: You can almost certainly count on something (and perhaps a lot of somethings) not working correctly—if at all. ▐▌

BY JOSEPH MORAN

Life-Altering (Or At Least Mildly Interesting) Tip Talk

Most of us have a love/hate relationship with technology. We love it because it enhances and enriches our lives; it eliminates tedious, repetitive tasks; it makes us more productive and efficient, so we can spend quality time with our loved ones; and it's more fun than a barrel of modems. Now that the fantasy portion of this column has concluded, let's log in to reality.

For more than 20 years, I have been helping people with their computer problems, and within that context, I communicate with users worldwide on a daily basis. With no scientific studies, no documentation, and lacking even a few notes scrawled on a cocktail napkin to support my minimal-yet-shoddy research, it is my considered opinion that the one common characteristic all computer users share is our love for a good computing tip. I don't mean generic, useless tips, such as "My cousin Woody told me that if you click My Computer—or maybe it was the Control Panel—and then you double-click the thing that looks like an inverted artichoke and place—or maybe it was remove—the check mark, that you'll never get any viruses." No, I'm talking about the types of tips that stir the soul and tingle the cockles of one's viscera. So with thoughts of tingling viscera in mind, it's time once again for some life-altering tip talk with Mr. Modem:

How many times have you visited a promising Web site only to be driven away by a hideous, ear-wrenching sound track? Sure, you could turn down your speakers or screech along with Yoko, but for the fastest bail-out possible, press the ESC key to stop the music dead in its track. This doesn't work 100% of the time, but then again, not 100% of all deaf-defying Web-based music will make your ears hemorrhage.

Unless keeping track of updates is your hobby, you probably don't have a clue which ones have been installed in your system. If you installed the massive WinXP SP2 update—you would remember that big boy—you now have the ability to view which updates or patches have been installed. Go to your Control Panel, select Add Or Remove Programs, and place a check mark at the top of the screen beside the Show Updates option. Every installed update and its date of installation will appear under a listing of each patch.

It's been my experience that you can't purchase any electronic devices today without receiving a complimentary AC adapter. Have you ever noticed that none of these virtually indistinguishable wall warts ever identify to which device they belong? If you're like me, you've collected a junk drawer full of unidentified, orphaned adapters, and you're teetering on the brink of adapter disorientation syndrome (ADS). To combat the debilitating effects of ADS, when you bring a new AC adapter home, write the name of the device to which it belongs on a sticker and affix it to the power cord of the adapter. Don't place your ID sticker on the adapter itself because it can heat up and cause the sticker's adhesive to lose its grip—a feeling to which I can relate when I'm the recipient of yet another adapter.

You're minding your own business, happily surfing along, when you're suddenly confronted with an intrusive, offensive script error message that has the audacity to ask what script debugging program you would like to use? If your typical response is "Huh?" try this: In Internet Explorer, click Tools, Internet Options, and the Advanced tab. Under Browsing, check Disable Script Debugging and uncheck Display A Notification About Every Script Error. Click OK.
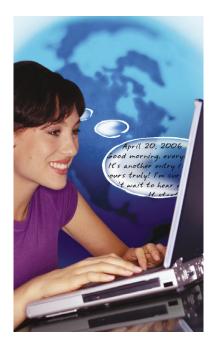
Disposable email addresses are invaluable when ordering merchandise online, registering at Web sites, or when an annoying person keeps pestering you for your email address. Jetable (www.jetable.org) adds a new wrinkle to free disposable addresses by permitting you to determine the lifespan of the address, from one hour to one month. As soon as your address is created, any mail sent to your short-term address is automatically forwarded to your real email address until the Jetable address vaporizes into the cyber cosmos.

Do you have a favorite computing tip? If so, tell me all about it! If your tip is selected for publication, you'll receive an official Mr. Modem mouse pad and the eternal gratitude of other PC users harboring disturbing, love/hate computing thoughts, just like the rest of us. ❙❙

BY MR. MODEM

Mr. Modem (Richard Sherman) *is an author, syndicated columnist, radio host, and publisher. "Mr. Modem's Weekly Newsletter" provides personal responses to subscribers' computer and Internet questions, plus weekly computing tips, Web site recommendations, virus alerts, hoax warnings, and more. For additional information, visit* **www.MrModem.com.**

Blog!

It's Better Than Bad: It's Good

It seems you can't turn around online without bumping into someone's blog. From your neighbor's strange (but intriguing) lunchbox blog to Google's corporate blog (googleblog .blogspot.com) to Wonkette's hilarious and irreverent political blog (www .wonkette.com), everyone's jumping on the blogging bandwagon.

Blogging 101

But what is blogging? The word itself derives from the phrase "Web log." The concept is nothing new. It goes all the way back to the very early days of the Web. Remember all the excitement about being able to share personal Web pages with the whole world? The blogging movement is a refinement of that personal Web page concept. Essentially, blogs are online journals, written in a personal and conversational style, updated regularly and chronologically. Bloggers often link to and comment on other information sources on the Web. The best blogs focus on a specific subject and offer interesting personal insight into that topic. They can be informational, persuasive, or therapeutic. Of course, as with all things online, blogs have become more sophisticated and more commercial over time.

There are several trends that led to the blogging explosion One is that more and more people started finding their voice online. We moved from using personal Web pages as vacation slideshow tools to creating forums where we can speak to the world on whatever we're passionate about. Another is that big players started paying attention. Your cousin Ned's ranting about election politics takes on extra significance when he receives credentialed access to the Republican and Democratic national conventions as a press correspondent. Finally, blogging technology became easily accessible to the masses. When Grandma can set up a site in a few minutes to chronicle the world of porcelain horse figurines for collectors around the globe, blogging's potential expands dramatically.

Get Involved—Read

The easiest way to learn about blogs and blogging is to begin reading. Find blogs on subjects that interest you and check in regularly. You'll find great and poor writing, amateur and professional presentation, labors of love and commercial fronts, plus all of the other variety usually found online. Where to begin? Try an Internet search for one of your hobbies or interests and add the word "blog" to the search terms. For example, a film buff might search for "movie blog" and view the results. Search the Web sites of media outlets you trust for columnists who create personal blogs under the publication's banner. Or check out some online blog directories. For a quick list of some prominent blogs and blog directories, check out our "Top Blogs" sidebar.

Once you find a few regular blogs, you'll probably start wondering if there's an easier way to keep up on the latest postings. That's when you'll start noticing links on sites for RSS (Really Simple Syndication), Atom, or XML (Extensible Markup Language) feeds. Syndication feeds deliver the titles and summaries of new posts directly to your computer or mobile device,

Syndicated feed readers, such as Pluck (www.pluck.com), integrate with your browser and automatically aggregate new posts from all your subscribed blogs.

without requiring a visit to the site or waiting for email newsletters. Find and download a feed reader program and sign up to receive updates from your favorite blogs. Review each post in the feed reader and follow the link to read the full posting at the blog site.

Finally, you can begin to contribute by discussing and commenting on posts at your favorite blog sites. One of the greatest aspects of blogging is the ease with which communities of interest can develop. By taking part in those discussions and adding your own voice, you can enhance the value of the community for everyone.

Get Involved—Write

The next step from following your favorite blogs is creating one of your own. The proliferation of blogging tools means that it's easier than ever to get started. But it also means it's harder to develop an audience, as you're competing with lots of others.

The first thing you need for a successful blog is something to say. Think about topics on which you have extensive experience or a unique perspective. Can you contribute something that's not already out there and that other people will be interested in hearing? Can you write well enough and concisely enough to create a distinctive voice that cuts through the online clutter to deliver a message? And can you commit the time and energy to stick to it? Think of all those sad abandoned personal Web pages floating in cyber space—don't even start a blog if you can't keep it going.

Now think about your technology skills. You don't need much experience to run a blog, but your level of expertise with HTML (Hypertext Markup Language), FTP (File Transfer Protocol), and other technologies will determine which services are best for you. Having regular Internet access, a reliable email account, and research skills to find material are crucial prerequisites.

Spend a little time planning your blog. How often will you post? Will

Top Blogs

Computer & Consumer Electronics Blogs
- Slashdot (slashdot.org): The classic journal of nerdery.
- Gizmodo (www.gizmodo.com): Gadget news with fun commentary.
- CE Lifestyles (www.celifestyles.com): Daily electronics updates from *Smart Computing's* sister publication.

News Blogs
- BigBlog (www.bigblog.com): Collection of news feeds on a wide variety of topics.
- InstaPundit (www.instapundit.com): Tennessee law professor Glenn Reynolds' long-standing current events commentary.
- Fark.com (www.fark.com): Strange yet fascinating news from around the world.
- Topix.net (www.topix.net): News from around the world.

Popular Culture Blogs
- Gawker (www.gawker.com): New York-centric culture and media gossip blog.
- The Consumerist (www.consumerist.com): Adventures and misadventures in consumer culture.
- The Movie Blog (www.themovieblog.com): The latest from Hollywood and beyond.
- Stereogum (www.stereogum.com): Music news and commentary.

Blogs On Blogging
- Bloggers Blog (www.bloggersblog.com): News from the blogosphere.
- Blogcritics.org (www.blogcritics.org): Consolidated postings of more than 1,000 member bloggers.

Blog Directories & Search Engines
- Blog Search (blogsearch.google.com): Google's blog-specific search engine.
- Technorati (www.technorati.com): Search, categories, and a Top 100 list.
- Blogwise (www.blogwise.com): Directory of more than 70,000 blogs from around the world on all sorts of topics.

you let readers post comments, or do you prefer to moderate discussions? Do you want to include ads on your blog and, if so, what kinds? Do you want to present your own information and opinions or aggregate links from other sources and provide commentary? How extensive an archive do you want? Do you want to offer automatic RSS feeds to subscribers? Answering these questions not only helps to focus your efforts, but also helps you determine which features you'll need when you shop for blogging sites and services.

Finally, you need a place to host your blog. In the early days, you had to program your blog, host it yourself, and manually update every page and link. Today, however, free services abound. Many include page templates, simple posting interfaces, domain names and hosting, discussion tools, archives, and link tracking as part of their basic services. With most services, launching your blog is simply a matter of creating an account, choosing your features and layout, naming for your blog, and starting to post. For a rundown of several prominent blogging services with feature and price comparisons, see our "Create Your Blog: A Blog Site Roundup" chart. We'll walk you through the process using Blogger, Google's popular free blog hosting service, but it's just one of several high-quality, no-cost options.

Direct your browser to www.blogger .com. Look around, see what's available, and then click Create Your Blog Now. Set up an account by selecting a

As Google products, Blogger and AdSense integrate to provide unobtrusive (and revenue-generating) text ads on each page.

username, password, and display name (what you want people to call you) and providing an email address. Continue to name your blog and select a URL. By default, Blogger sites are hosted at the blogspot.com domain. Your blog's address will be *blogname*.blogspot.com (eatphilly.blogspot.com, for example). Next, choose a design template from Blogger's default layouts. You can modify your template's layout later.

Begin posting immediately or take some time to write up your first few posts and return to Blogger later. When you're ready, log back in, select your site, and use the Create or Edit Posts links to populate your blog. Enter text or hyperlinks in the text box and use Blogger's editing tools to adjust formatting, add images, and check spelling. If you want to code HTML directly, click the Edit HTML link for more direct control of each post. Preview, Save, or Publish each post as you complete it, and Blogger will automatically republish your blog with any updates.

Click Settings to access a variety of site options. Publishing lets you change your URL or notify Weblogs .com when your site changes. Formatting determines how long posts stay on your main page and sets date/time options. Enable or disable Comments to let various groups of people comment on your posts in a variety of ways. The Archiving tool lets you collect past postings on a daily, weekly, or monthly basis. It also lets you create Permalinks—assigning a unique and permanent URL to each post. Site Feed creates an option for readers to subscribe to your blog and pick up posts automatically through a feed reader. Email lets you assign an address to which you can email updates, which Blogger will add as new posts. The Members link lets you assign authoring rights to trusted users.

Click Template at the top of the Blogger interface to adjust your colors, change design templates, or adjust your layout. But the most useful part of the Template area is the AdSense tool, which lets you sign up to add text ads to your site. They're the same ads found to the right of Google's search results, and they operate the same way: by scanning your posts and identifying relevant ads. You'll receive a share of Google's income from the sale of each ad. You won't be able to retire on the revenue, but it doesn't hurt to generate a little cash from something you enjoy.

Remember the first rule of blogging: Post early and often. The more active you are, and the more you engage your audience, the more popular your blog will become. Add your blog address to email signatures and postings on other blogs. Contribute to similar communities and exchange links. Submit your site to any blog directories you come across. Most of all, have fun. ❚❚

BY GREGORY ANDERSON

Create Your Blog: A Blog Site Roundup

Blog Site	URL	Features	Price
Blogger.com	www.blogger.com	Hosting & Subdomain Publishing Tools Design Templates Comments Support Archives Syndication Feeds Integrated Advertising	Free software Free hosting
Movable Type	www.movabletype.org	Publishing Tools Design Templates Comments Support Archives Syndication Feeds	Free Personal Edition Hosting from $8/month
AOL Journals	hometown.aol.com	Updates Via IM Publishing Tools Design Templates Comments Support Archives	Free with AIM account
Yahoo! 360°	360.yahoo.com	Mobile Phone Updates Publishing Tools Design Templates Yahoo! Music Streams Local Reviews	Free with Yahoo! ID

What Color Is Your Thumb?

Find Forums Of Tested Tips & Techniques At GardenWeb.com

Whether you're a garden pro, a hopeful brown thumb, or a newbie without a pot to plant in, gardening secrets are meant to be shared, and GardenWeb.com is a great place to tap into them. Maybe you're proud of how your antique roses grow and want to share tips for heartier blooms with other antique, Austin, and old-garden rose growers. Or perhaps you're looking for advice on starting an herb garden in containers on your patio and wonder how other people in your zone did it.

At this jam-packed online community—as long as you can click through the ubiquitous and annoying pop-up ads—you can visit with like-minded gardening enthusiasts about hundreds of garden-related topics; find gardening events in your area (or the places you're planning to visit); and search for seeds, plants, pots, patio furniture, garden art, tools, and much more for your own garden.

Navigation is fairly easy: You'll see a set of links across the top of the page for Garden Forums, Home Forums, HortiPlex, FAQs, Glossary, and Resources. Toward the middle of the page, you'll see links for The Garden Bazaar, The GardenWeb Directory, Events Calendar, Gardening Q&A, and Today's Birthdays. We'll discuss the links in more detail momentarily.

Join In

You can read and access most sections of the site without a membership; however, when you're ready to post a question or answer, you'll need to become a member. Membership is free and entails entering your email address and setting up a password and member name. Other users will see your member name when you post to the forums, so you're encouraged to use only your first name.

When you sign up for membership, you may enter a brief Personal Blurb and your favorite forum, birth date, gardening zone, the country in which you live, and any links you wish to supply, such as to your home Web page, email address, online journal, and trade list, to name a few. If you don't want to share any of that information, don't enter it when you register. If you change your mind later, click the Your Profile link at the top of the home page and edit your information.

Garden Forums. In the forums you'll find discussions on hundreds of topics.

Members post pictures to demonstrate a point, such as how to raise herbs in containers.

There are forums covering broad subjects, such as Regions And Climates, Propagation, and Wild Flowers And Native Plants. You'll also find specialized forums discussing the specifics of Cutting Gardens, Edible Landscapes, Bees & Beekeeping, and Potager Gardens, to name a few. With the exception of the Professional Topics forums, where you'll find discussions among horticulture and botany professionals, you won't find experts posting or answering questions in the other forums because GardenWeb.com is a community designed for members to share information with one another.

Sneak a peek at the Garden Clinic forum and type **Moles And Gophers** in the search field toward the top of the page. As of press time, we found no fewer than 91 responses to the question, "How can I rid my garden of moles, voles, and gophers?" Creative gardeners swear by a variety of methods, including trapping them; filling tunnels with kitty litter, running water, poison peanuts, or castor oil; or feeding the rodents Juicy Fruit gum.

Home Forums. Similar to the setup at GardenWeb.com, Home Forums is a community devoted to all-things home (buying, selling, owning, cleaning, decorating, rewiring, etc.). Members of the GardenWeb.com community may post questions and answers here, too.

HortiPlex Database. When you're looking for information on daisies on Google (www.google.com), you have to sift through data on pellet guns, movies, rock guitars, or open-source

- Posted by: LaurelLily 9a Houston, TX (My Page) on Wed, Apr 27, 05 at 11:39

I grow ALL of my herbs in containers. This is because I started my herb garden when I was still living in an apartment. When I got a house, I put all of the herbs by the back (kitchen) door until I could put them in the ground, but loved so much the convenience of being able to slip outside to harvest herbs to use in cooking (even if it was dark or raining) in just a few seconds, that I left them all in their pots. I've re-arranged them since this picture to give them some more room and keep them from being crammed too close to each other, but this slightly outdated photo will give you the idea:

applications. Type **daisy** in Google's search field, and you'll get nearly 18 million returns; however, you'll have to scroll past 28 sites to find the first reference to flowers. The HortiPlex Database distills your search information, making it as relevant as possible. Type **daisy** in the Search The HortiPlex Database field, and the 185 returns all pertain to flowers. For instance, the first return for daisy lists the botanical name (Chrysanthemum) and Common Name (daisy). Click the More Info link under Daisy to visit a new page displaying the Genus, Family, and Author and a Links box with additional online resources, which may include images. Click the What Do These Terms Mean? link for definitions for words such as genus. In the Links box, click the PLANTS Database to visit the USDA Web site for a complete plant profile, including the entire classification for the plant, images, and related taxa.

Search the HortiPlex Database using a plant's common or botanical name.

FAQs. Before posting a question in a forum, visit the FAQ section to see if your question has been asked and answered. The staff and members of GardenWeb.com have harvested the most common questions from various forums, so you'll find answers more quickly. For instance, the most common question asked in the Carnivorous Plants forum is "What is a carnivorous plant?"

Glossary. You'll find definitions for more than 4,400 words related to gardening, botany, landscape architecture, and horticulture. Search for a term or by keywords using Boolean operators. If you have trouble finding a word, read through the notes to find out how the search works.

Resources. Click this link to find three of the links from the middle of the home page, GardenWeb Directory, Garden Events Calendar, and Garden-Bazaar, on one page. All three are searchable databases, and you have several ways in which to search each one. The GardenWeb Directory lets you search more than 1,200 clubs, organizations, and gardens. Search by Keyword, such as Botanical Garden; by Type Of Program (All, Charitable, Conservation, Educational, Membership, Native Plants, or Professional); Location (All, any of the U.S. states and Canadian provinces, or International); and you can Limit Your Search To (Volunteers Needed, Classes, and/or Master Gardener Program).

The Garden Events Calendar is also a useful tool for anyone who travels, and it's nice to know what shows, lectures, and plant swaps are taking place in your city, as well. You can either search the calendar for events or post your garden club's meeting and show schedules. To post your dates, click the Submission Form link and follow the prompts, which include agreeing to the terms of the site. To search for an event, select a Month (or leave the field on the default All), Location, Keyword (for instance, Tulip Festival, or leave it blank), and Type Of Event (All, Shows, Festivals, Plant Sales, Plant Swaps, Garden Tours, Lectures, Workshops, or Seminars).

The GardenBazaar lets you search for any of hundreds of garden-related items to buy. You'll find books, seeds, beneficial insects, repellents, aquatic plants, fertilizer, hostas, lights, ponds, and much more. Again, you may search by Keyword (or leave it blank); Product Lines, which will help make the results more manageable; and Check To Limit Your Search To (Mailorder, Services, Retail—Storefront, and/or Wholesale).

Today's Birthdays. Click this link for a list of members' birthdays. The list is for the current day, and there are usually hundreds of members celebrating their birthdays on any given day. If you've traded tips with a member and want to wish him a happy birthday, click his username. If he's entered his email address in his profile, you'll be able to click a link and email him.

How Does Your Garden Grow

Whether you're enjoying the pretty little rows in your vegetable garden or ready to give it all up to the rotten little rodents, you'll find someone on GardenWeb.com talking about it. And if you don't, post a question, and soon you'll be collecting kudos or sympathy from many, many gardeners who've hoed that row before. ▌▌

BY KATHRYN DOLAN

Tips For Using GardenWeb.com

- Rather than using the Back button on your browser to return to a previous page, click a link at the upper left of the page to return to the previous forum or index of forums. For instance, if you're reading a post called "Best Selling Herbs" in The Market Gardener forum, click the Other Forums link. Frequently, clicking your browser's Back button returns an error message.

- At the upper right of each page, you'll see a box of links called Gardening Ads, which likely supplement the cost of running the site. When you click the links, they'll open on a GardenWeb.com page, and they usually link to something related to what you're reading, such as garden supply or patio furniture Web sites.

- Don't be shy about posting, but if you do, you'd better know what you're talking about. You'll be hastily but kindly rebuked if you post digressions, rumors, or untested theories as "truth." Members of most forums (except the Garden Writers Forum) are positive, and supportive, but they're also no-nonsense.

It's All About You

Google Personalized Home

You could do a lot worse than to choose Google (www.google.com) as your browser's default home page. Owing to its spare, no-nonsense design, Google loads faster than just about any site in cyberspace. And because the Google home page is free of advertisements and online marketing subterfuge, setting it as your default home page ensures that you'll at least begin every Web session without the threat of pop-ups, adware, spyware, third-party cookies, unsolicited toolbars, or other annoyances that some Web pages might try to send your way.

But Google would be an even better default home page if it gave you a head start on finding the information you want most from the Web. For example, imagine how great it would be if Google could display updated headlines from your favorite news sources, the latest job listings from your favorite job Web site, and the weather forecast for your hometown.

Imagine no more. A relatively new Google feature, Google Personalized Home, lets you fill the blank space on Google's home page with all sorts of links and Web content and lets you transform Google from a safe, fast-loading home page to a just-as-safe, just-as-fast-loading personal Web portal that's a perfect place to start your online day.

Get Your Account & Sign In

If you don't already have a Google account, you'll need to create one before you can use Google Personalized Home. Head to www.google.com/accounts/NewAccount and scroll to the bottom of the page. Enter your email address, choose and confirm a password, and enter the characters pictured. (This is a security measure that prevents a computer program from entering account data on your behalf without your permission.) Then click the I Accept button to create your account.

Within a few moments, Google will send you an email verification of your new account. As instructed, click the link to activate the account, and when you arrive at the activation page, click the Sign In link. Enter your email address and password, select Remember Me On This Computer, and click Sign In. An account summary page appears; in the top right of this page, click Google Home. The Google home page will reappear, this time with your email address displayed in the top right of the page.

If you do have a Google account—which you might have if, for example, you have a Gmail email account—you can skip all of the above and simply surf to www.google.com and sign in.

Get Acquainted & Start Personalizing

Click the Personalized Home link. You'll see Google's starter Personalized Home page, featuring Quote Of The Day, Top Stories, Weather, and Word Of The Day features. Each of these is an **RSS** (**Really Simple Syndication**) **feed**, material that a Web site has published in a special

XML (Extensible Markup Language) format that allows that material to be republished, or syndicated, on other Web sites. You'll create your Google Personalized Home page by tweaking or removing these starter feeds and adding and tweaking other feeds.

Start by customizing the Weather feed to report the weather for your own town. To the right of the word "Weather," click Edit. If necessary, select a country other than the United States; then, in the Add A City box, enter your ZIP or postal code or the city and state and click Add. Repeat the procedure for any other city for which you want to track the weather. If you don't want to track the weather in Happy, Texas, click the corresponding X to delete it. Then click Save. The Weather feed changes to display forecasts for the city (or cities) you chose.

Google Personalized Home lets you transform the Google home page into a custom Web portal with information and links most important to you.

You can edit the other feeds in similar fashion. For example, if you'd like to display more or fewer stories in the Top Stories feed, click Edit next to Top Stories; in the Show drop-down menu, select the number of stories you want to display. Click Save.

Add More Feeds

Google has assembled a full menu of additional feeds that are ready to pop into your home page. Click Add

Content, and a list of feed categories appears in a sidebar along the left edge of the browser window. To add a feed, simply click the appropriate feed category (if necessary) to expand it and then click the Add button next to the feed you want to add. For example, to add a feed containing the latest *The New York Times* headlines, click News to expand that category and then click the Add button next to New York Times. The sidebar disappears (don't worry, you can get it back) and *The New York Times* feed appears at the top of the left column.

To add another feed, click Add Content again to redisplay the sidebar and then repeat the process. Again, you can edit any feed you add by clicking Edit and changing the available options. To change the position of any feed on the page, click its title bar (a four-pointed arrow pointer will appear) and drag it to a new location.

To delete a feed, just click the X next to that feed's name. (You can use the Undo bar that appears to undo your deletion, until you make another.)

My (Meaning Google's) Stuff

The My Stuff category includes feeds for Google services you may already be using or may consider using once you see how useful they are in the context of a home page.

Take the Bookmarks feed. (This is more of a link-maker than an actual feed.) You may be used to choosing bookmarks, or favorites, from your browser's menu; all the Bookmarks feed does is put links to your bookmarks into your Personalized Home page, where you can get to them faster. Click the Add button next to Bookmarks, and an entry form

appears at the top of the left column; use it to enter, name, and add links to sites you visit most often. When you're finished, click Save.

Search History lets you list your most recent searches; in order to use this feed, you have to enable Google's Personalized Search service, a technology that attempts to make your search results more relevant by tracking not only your searches, but what results you click. The Movies feed ruins a very convenient feature—a link to a Google page listing show times at all the theatres in your area—by including an unnecessary and space-wasting listing of the top-rated current movies (but you can fix this by listing the show times page in the Bookmarks feed). The Stock Market feed displays the four major indexes, and you can edit the feed to track any stock, so long as you know the stock's symbol.

If you have a Gmail account, in the My Stuff category, you'll also see a Gmail feed. Add it, and you'll be able to see—and click straight through to—the newest messages in your Gmail inbox. If you like Gmail because it lets you read and send email without having to open a dedicated email application, you'll really like being able to keep tabs on your mail from your home page, without even having to open the Gmail page.

A Feed Of Your Own

You can also add feeds from sites not in the category list, such as a feed that updates you on local job openings in your field of work or a feed from a discussion group pertaining to a hobby or interest. But you have to find such feeds before you can add them.

Most large, popular sites have at least one RSS feed; many have multiple, categorized feeds that deliver a specific type of information—for example, most major newspapers have an RSS feed corresponding to each major section of the paper, and some

even have RSS feeds for individual columnists. Just look for the bright orange RSS or XML button on the site's home page; clicking it will usually take you to a list of categorized feeds.

Some sites offer highly focused feeds or ones that generate updated search results. Craigslist (www .craigslist.com) offers an RSS feed for just about every content page you might visit. Suppose you want an RSS feed that keeps you current on writing job listings in the Boston area. Head to the site, click the Boston link, and under Jobs, click Writing/Editing. At the bottom of the page, you'll find the RSS button.

In whatever site you're searching, once you find the button for the feed you want, click it. You'll be taken to a page of indecipherable XML code, but don't let that bother you. All you need is the page's URL, found in your browser's Address field. Double-click it to select it and then right-click it and select Copy from the menu that pops up. Return to your Personalized Home and click the Add Content link. At the bottom of the sidebar, click Create A Section; right-click the text box that appears and choose Paste to paste the feed URL. Click Go. Your feed will appear, as always, at the top of the left column; you can move and edit it as you would any other feed.

If you can't find a feed from the site you prefer, you may be able to use the Create A Section box to find a suitable substitute. Instead of pasting a URL in the text box, enter a keyword or two describing the type of information you want in a feed and click Go. Google will return a list of

Google offers several ready-to-use RSS (Really Simple Syndication) feeds that you can quickly pop into your page.

feeds you can peruse; if you want to add one to your page, just click Add.

Tips For Happy Personalized Homemaking

You now have all the skills you need to create and continuously tweak the Personalized Home page of your dreams. Once you've created a page you're happy with, try these techniques for using it efficiently.

Make it your default home page. Obviously, Google Personalized Home isn't much of a starting place unless it's the first page your browser loads. To make this happen, first get to your browser's default home page setting. In Microsoft Internet Explorer, choose Tools and then Internet Options; in Netscape or Mozilla Firefox, choose Tools and then Options. If necessary, click the General icon. In Opera choose Tools and then Preferences. Click the General tab if necessary. Then, in the Home Page field, enter the Personalized Home URL

(www.google.com/ig) and click OK. (In Opera, you may want to set Startup to Start With Home Page before clicking OK.) So long as you've set your browser to accept cookies from Google and you selected the Remember Me On This Computer option when you signed in, your browser will open to your Personalized Home page.

Give links their own window or tab. Over time, you may find Personalized Home is less of a starting place and more of a base of operations—a place to which you return throughout the day to monitor stocks, check new headlines, start new searches, and so on. So instead of having to make your way back to the page after following one of its links, try opening each from the page in its own browser window (if you use Internet Explorer) or its own tab. Next time you want to click a link, right-click it; in Internet Explorer choose Open In New Window. In Netscape or Firefox, choose Open Link In New Tab. In Opera choose Open In New Page.

Scroll down your fonts. The Personalized Home screen shots in this article are of full-screen (maximized) windows on a 1,024 x 768 pixel screen display. If you don't have this level of screen resolution—or if you can't devote your entire screen to your browser—Personalized Home can get kind of crowded (and days of your Google weather forecast can get crowded out). As a fix, you may want to get in the habit of using your mouse's scroll wheel to reduce the font size when you view Personalized Home. In Internet Explorer, Netscape, or Firefox, press CTRL and turn the scroll wheel forward (away from you) to decrease the text size and backward to enlarge text. In Opera hold down CTRL and scroll backward to decrease text size and forward to enlarge text. ∎

BY MARK SCAPICCHIO

Many sites include multiple categorized RSS feeds.

Enhance Your Time Online

Making Taxes Less Taxing

Problem: As luck would have it, I owe the government money this year in taxes. Is there a quick and easy way to pay and move on with my life?

Solution: Regardless of whether you file electronically, if you owe money on your taxes, consider using the IRS' authorized online payment point, Pay1040 (www.pay1040.com). What are the advantages to sending in your money this way? There's the convenience of not going to the post office. You'll save the price of a stamp, but that's a bit deceptive as there's a 2.49% "convenience fee" (minimum one buck, no maximum). This charge makes this service more attractive for nominal fees. However, the real advantage is the fact that once you receive your confirmation number, you'll know that your payment has been received.

A Grave Matter

Problem: My interest in genealogy has caused me to wonder where some of my distant relatives are buried.

Solution: It may seem strange, slightly morbid, or downright weird that there would be a Web site dedicated to finding grave sites. But Find A Grave (www .findagrave.com) is just such a site. There are a whopping 9.4 million grave records here, which makes this database a great genealogical resource. So whether you want to fill out missing branches of your family tree, track down celebrity memorials, or make a virtual visit to a loved one's grave, this is the place for you.

Wedding Registry Central

Problem: My friends are getting married soon, and I don't know what stores they are registered with. It seems awkward to ask them, so I feel kind of stuck.

Solution: Most stores that have wedding registries have a section on their sites to look up the happy couple's list. Instead of going to multiple sites and hoping for the best, waltz on over

If this year's tax season has you owing Uncle Sam, forget writing out a check. Pay your federal income taxes online.

to WeddingChannel.com (www.weddingchannel .com). On the home page is a mega search box that will scour the registries of about 20 stores, including Bloomingdale's, Macy's, Pottery Barn, Williams-Sonoma, Crate and Barrel, and Tiffany & Co.

Extra tip: Even after the big day, wedding registries are great to mine for birthday and holiday gift ideas.

Beating The IVR Blues

Problem: Whenever I try to call a big company with a customer service issue, I have to wade through the unending IRV (interactive voice response) systems. All I want to do is talk to a human being—is that too much to ask?

Solution: Many companies believe that IVRs are a huge cost-savings. If you have a simple request, such as checking your credit card balance or finding out a store's hours, these recorded message systems can be helpful. But if you have a problem, wading through menu after menu of choices can drive you mad. Good thing you now know about the IVR Cheat Sheet (paul english.com/ivr). This simple site lists either direct dial phone numbers or a sequence of numbers to press to transfer to a human rep.

A Different Kind Of Easter Egg

Problem: I'm familiar with the concept of a DVD Easter Egg—hidden features that can only be accessed by pressing certain remote control key combinations. I've managed to find a couple on my own, but where can I find more?

Solution: Easter Eggs have long been great fodder for message boards. But for an easy, searchable solution, go to DVD Easter Eggs.com (www.dvdeastereggs.com). It hast a clean, usable interface with an alphabetical index and a search box. And while the eggs are submitted by users of the site, they tend to be of a higher caliber than some of the other egg listings.

Leave the candy eggs to the Easter Bunny. Find DVD hidden features at DVD Easter Eggs.com.

Seniors Surf (The Web), Too

AARP

www.aarp.org

Having trouble with the new Medicare prescription drug coverage program? AARP's Web site offers visitors up-to-date information about the program and its own plan. It also has information for people 50 and older about such topics as money, technology, and travel. And don't overlook the Fun And Games section, especially if you're a Sudoku fan. If you're thinking about joining the AARP, click the About AARP tab and then visit its History & Mission area. Once you're ready to join, click the orange Join AARP button. However, you won't need to join to take advantage of many of the site's features. Read articles, sign up for the free AARP Webletter, and read messages in the site's extensive forums without membership.

Forbes.com

www.forbes.com

Forbes.com's Retirement section offers plenty of advice for people planning for retirement. The section offers several Investment Guides, which discuss specific retirement issues. The Inside Retirement area links to information about investing for your retirement. The main page also offers links to recent *Forbes'* coverage of retirement topics. Don't overlook the Best Of The Web areas, which link to retirement calculators and articles about 401(k) plans. Find the Retirement section from the main page by clicking Personal Finance and then selecting Retirement.

Go RVing

www.gorving.com

Thinking about buying an RV and touring the country when you retire?

We think you have the right idea, and so does the Go RVing Coalition, a group of RV manufacturers and suppliers. The Go RVing site has articles about choosing an RV and determining whether you want to buy the RV or rent it. If you're not sure whether you're an RV fan, sign up for the free video. (You'll need to fill out Go RV's questionnaire to get the video.) You can also sign up for the Go RVing newsletter.

Office Of Personnel Management

www.opm.gov

The Office Of Personnel Management, which handles the U.S. governments' human resources needs, offers a retirement section. If you're a government employee and are planning to retire within the next five years, check out the Planning For Retirement section. It offers subcategories for people five years, one year, six months, or two months from retirement. Each subcategory has links to frequently asked questions and advice. The Retirement section's main page has annuity calculators. To find the Retirement section from the main page, click the Quick Index link. The Retirement link appears in the Quick Index.

Retirement Living

www.retirementliving.com

If you're looking for information about retirement, check out the Retirement Living Information Center. The site has several categories, including a detailed database of state aging agencies. Retirement Living also describes each state's tax information. If you're planning to move to a new state when you retire, you'll find some great information here. Be sure to read the Taxes By State article before you start looking up states—it will help make sense of the data in the state profiles.

Retirement Net

www.retirenet.com

This site helps people find retirement communities. Whether you're looking for a golf community or want to travel in an RV, you'll like Retirement Net's Community Finder. You can search for communities by entering a city, state, or ZIP code, but you'll have much more fun by browsing the Finder's database. The main page lists popular U.S. and International regions. If you're not interested in any of those, click Find A Community and select an area. Each area has a retirement community listing that includes descriptions and pictures of the community. If you'd rather choose by lifestyle, click the Types Of Retirement tab at the top of every page.

Senior Mag

www.seniormag.com

Senior Mag boasts daily video features that cover topics for seniors and senior caregivers. It also offers a search engine that helps people find attorneys who have experience with senior legal issues. You'll find plenty of articles and videos, as well as links to local services for seniors. Sign up for the free newsletter and check out the Personal Growth area, which covers emotional and physical questions. You won't want to overlook the Wisdom 'N Humor section, which features jokes and humorist hittimer G. Willikers.

That's
News
To You

Finding the appropriate Usenet discussion group to match your interests can be a monumental task. So each month, we scour tens of thousands of newsgroups and highlight ones that delve into popular topics. If your ISP (Internet service provider) doesn't carry these groups, ask it to add the groups to its list. This month we see what tech-savvy retirees are up to.

alt.fifty-plus.friends

If you're looking for some on-line companions, you'll love this group. Members discuss many topics.

....

alt.social-security-disability

Share your concerns or victories with other members attempting to collect Social Security or disability funds.

....

rec.outdoors.rv-travel

Share your travel plans with fellow RVers. If you haven't planned your next drive, they'll be happy to offer ideas.

Share The Wares

Some of the best apples in the online orchard are the free (or free to try) programs available for download. Each month we feature highlights from our pickings. This month, we find retirement investment software.

ISG Personal

www.isgplanning.com

If you want to estimate your retirement income (based on the amount of money with which you'll begin your retirement), check out ISG's ISG Personal software. The program has an easy-to-use interface and step-by-step instructions. The first screen has several fields, including Scenario Years, Beginning Capital, and Inflation. You'll need to enter the appropriate information into these fields to use the program. You'll also need to adjust your investment allocations. Once you've filled out all of the fields, simply click Calculate Ending Capital. You can also see investment hints by clicking Optimize Investment Allocation. If you have any trouble filling out the fields, check the program's FAQ. Of course, the software also includes links to information about other ISG software, but the program doesn't have any obnoxious advertisements.
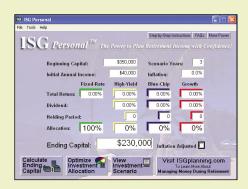
Retirement Income Calculator

www.troweprice.com

T. Rowe Price's Web site offers a variety of free financial tools, including a calculator that helps you determine how you'd like to save for your retirement. According to the site, the calculator takes uncertainty into account—it helps you prepare for life events you can't predict.

You can use the drop-down arrows in several fields to quickly select answers, but you'll need to supply some of your own numbers, including the retirement assets you expect to have when you retire. If you don't understand a field, click its title. A small window that includes an explanation of the title will appear.

The simulation makes several assumptions, so the calculator requires
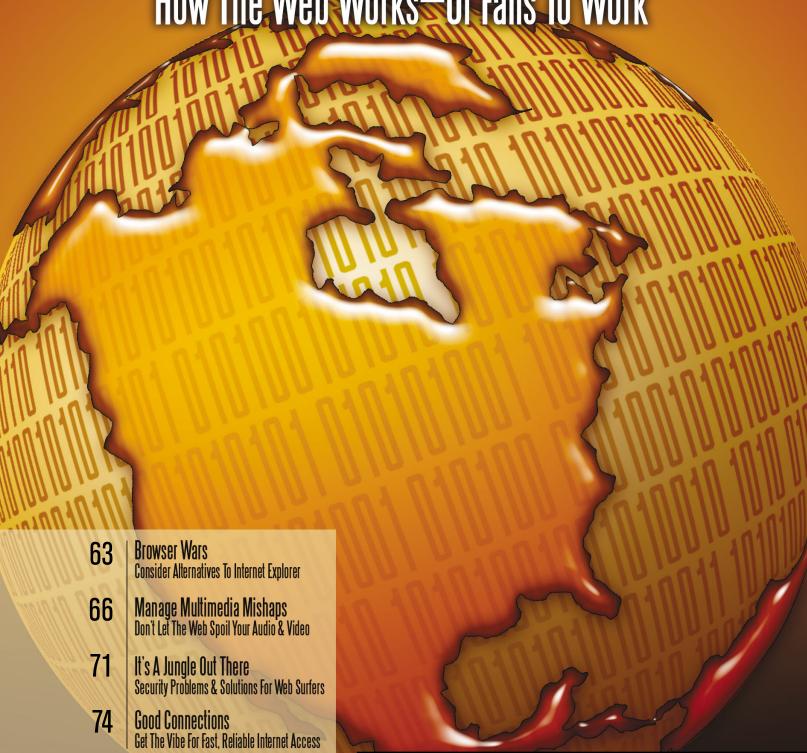
Download ISG Personal free and plan your retirement investments.

you to read a lengthy description of the assumptions before seeing the calculator's results. Once you've read about the assumptions, you can click the See Your Results box

To find the Retirement Income Calculator from the main page, click the Individual Investors tab and then click New To T. Rowe Price. Finally, click the Planning For Your Retirement link in the Retirement/IRA box.

On & Off The Job

How The Web Works—Or Fails To Work

INTERNET TROUBLESHOOTING

When you try to visit a Web site and nothing happens, all you see is a potentially broken browser. Under most circumstances—especially for broadband Internet users—everything online runs so smoothly that it's tough to realize how hard everything is working behind the scenes. As soon as you press ENTER to visit a site, a host of software and hardware must spring into action to handle your request, and that means there are plenty of opportunities for errors to come between you and your requested data.

Knock Knock

The Internet is little more than a vast array of computer hardware—all connected to the same network. Your computer sends requests for data to other computers on the network, and that data is then sent to your computer. It all seems so simple in theory, but it's incredibly complicated in operation.

First of all, your computer and the computer on the other end of the connection must speak the same language, or they won't be able to understand one another. This is called a protocol, and TCP/IP (Transmission Control Protocol/Internet Protocol) represents two protocols that work together to serve as the common language of the Internet. TCP is the protocol that lets your computer make a direct connection with another computer, along with handling other parts of the transmission, while IP moves the data between the two connected computers.

Normally, when you copy a file from one place to another on your computer, the entire file is copied at once, but IP works much differently than that. Instead, IP chops up data into tiny units called **packets** and sends the individual packets streaming through the Internet, where they are received and reassembled by the computer on the other end. Imagine that instead of mailing a letter to someone, you cut out each character within your message and mail these characters separately to the same person, who then has to paste the entire thing together in order to read what you wrote. That's how IP works.

A pile of packets has the potential of becoming a huge mess, so TCP's other main duty is to stamp each outgoing packet with a number and a time, so the computer on the receiving end knows how to organize all of the pieces when recreating the original file. If a packet is missing, the computer on the other end sends a request to resend the missing packet and waits until it arrives before putting the file together. If a lot of packets are missing or the connection is severed before the transmission is completed, an error message is generated, and the receiving computer won't be able to assemble the incoming file.

Missing packets also are the main reason why media that's designed to stream over an Internet connection (such as streaming video or audio) becomes choppy when it must use a poor connection; there simply aren't enough packets getting through to play the complete file, so portions are skipped.

This all seems incredibly absurd until you understand that the Internet is designed for redundancy instead of for efficiency. A number of hardware devices called **nodes** serve as the intersections for threads of the World Wide Web, with data hopping from node to node until it reaches its destination. If one node is broken or overloaded with data, packets simply flow around it using other nodes, and any packets that were lost because of the damaged node can be sent individually instead of requiring that the entire file be resent.

Thus, large portions of the Internet's underlying structure could fail and data would still get through—thanks to the packet system. And that's something that couldn't happen if the Internet relied on linear data paths.

Understanding URLs

You can learn a lot about how the Internet works—and figure out a lot about why certain problems sometimes happen—by examining the anatomy of a URL (uniform resource locator). URLs are the text you type in your browser's address field (such as **http://www.smartcomputing.com**) that tells the browser which server it should connect to.

URLs have two distinct parts. The "http://" portion tells the browser you want to connect to the server

using **HTTP** (**Hypertext Transfer Protocol**; the set of standards used for exchanging info found on Web pages). If you'd typed **ftp://www.smartcomputing.com** into the address field instead, the browser would notice the "ftp://" portion and try to connect using **FTP** (**File Transfer Protocol**; a set of standards used for downloading files but not for viewing Web pages).

The second part, "www.smartcomputing.com," is the domain name of the server you want to access. In this example, ".com" is the top-level domain, and "smartcomputing" is the unique second-level domain. Second-level domain names are registered, so they are all unique, but you are free to create subdomains to attach to your second-level domain. The top-level domain also is fixed, and it's assigned when the second-level domain name is registered. As you likely know, ".com" is the most popular top-level domain, but there are others, including ".gov" (government), ".edu" (education), ".org" (used by most nonprofit organizations), ".mil" (military), and ".net" (used by many service providers).

If you mistype a URL, an error message will probably appear. But what about the error messages that display when you *know* you typed the proper URL? These errors usually result from the fact that URLs are just masks designed to hide the underlying IP (Internet Protocol) addresses that computers use to make the connection with a site's server. Every device connected to the Internet has a unique IP address, and when you type **www.smartcomputing.com** into a browser's address field, what you're really doing is telling the browser to connect to SmartComputing.com's IP address, which uses the format *XYZ.XYZ.XYZ.XYZ* (where *XYZ* is a number between 0 and 256).

Although domain names remain the same, the IP addresses they are associated with occasionally change, so special DNS (domain name system) servers are used to store a large database that matches domain names to their current IP addresses. Your browser uses

this type of server to look up the IP addresses of the domain names you type, so if the DNS server has problems or out-of-date information, typing a domain name sometimes doesn't work or takes you to a completely different site that now has the old domain name's IP address. Yes, it is possible to keep a hosts file on your computer that the browser accesses instead of using the DNS server, but out-of-date hosts files tend to cause even more trouble because they must be updated manually, so it's better to rely on DNS servers.

Report for www.google.com [72.14.203.99]

Data traveling via the Internet hops among nodes that are scattered all over the globe, and programs such as VisualRoute ($49.95; www.visualroute.com) can provide a graphical overview of the route your data takes.

The Blame Game

Yes, finding the source of your Internet trouble isn't always easy. Sometimes the service provider is to blame; sometimes the hardware involved isn't doing its job; and sometimes the computer on the other end of the connection is the responsible party. The good news is that it isn't always your computer's fault, and the articles in this section will teach you how to determine what's causing the trouble and how to fix the problem(s) without giving in to the uncontrollable urge to toss your PC through a window. ▋

BY TRACY BAKER

Browser Wars

Consider Alternatives To Internet Explorer

When something isn't working just the way we want, we typically have three options: discarding the item, fixing it, or living with it as it is. For some objects, the choice is obvious. For example, if you have car trouble, your first step probably wouldn't be to deliver the vehicle to the dump (as tempting as that might be). The same is true with your Web browser. If you're having trouble with Internet Explorer, the obvious first step might be to fix it or reinstall the program.

Well, not so fast; now would be a good time to evaluate whether you really need IE. Although it's still the dominant browser, it isn't the only one out there, and there are several other worthy browsers for you to consider. And even if IE is functioning just fine on your PC, we recommend that you take a look at some of the free alternatives to see if any of them better suit your needs.

Pluses & Minuses

One reason to consider an alternate browser is because (as is true with most programs) users often need a variety of features from their browser. Although IE's features may be working as its designers intended, it may not be until you try another browser that you realize you prefer how the same features perform via a different interface.
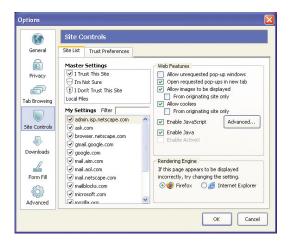
Consider the Find feature, for instance. When faced with a long Web page and the need to quickly locate a particular word, you can use IE's Find (On This Page) tool to search the Web page you're currently viewing. The tool presents a small pop-up window, into which you type the word or phrase. But not all users are fans of multiple pop-up windows, and in both Netscape 8.0 and Mozilla's Firefox, for example, the Find feature displays as a small toolbar at the bottom of the browser and not as a separate window.

Plus, other browsers may include features you've never even considered, but after trying these features, you won't want to be without them. For example, Opera offers native support (built into the browser; not just a third-party plug-in) for a variety of voice-controlled features. In addition, it's very likely that an alternate browser may speed up your Web browsing experience.

Another reason to consider an alternate browser is security. Most browsers claim to be more secure than IE, but those claims are hotly debated—even among security experts. It's certainly possible that IE is a more attractive target for those who have malicious intentions because it's still the browser used by a large majority of Web surfers. Even so, recent months have shown us that no browser is completely safe from crackers; just this past autumn, the browser that open-source fans adore, Firefox, was under attack from critics for its security flaws.

There's at least one major reason you may want to stick with IE for the time being, though—or at least use it some of the time: Many site developers continue to design and test their sites for IE users. As a result, a site feature (such as a shopping cart) may be

inoperable via another browser, but it may work perfectly in IE.

However, this site design focus is gradually changing and moving toward designing based on Web standards (established technologies for creating Web-based content) instead. Therefore, we suggest that you read our pros and cons for the most popular alternate

The Netscape browser includes the ability to assign trust levels to specific Web sites.

browsers and then check out the programs for yourself. Each program profiled here is available as a free download from the developer's Web site.

Firefox 1.5

The most popular alternative to IE—various estimates put its usage at more than 15% in the United States—Mozilla's Firefox (www.mozilla.com /firefox) has taken the Internet by storm since it was launched less than two years ago.

Firefox offers tabbed browsing, which means that instead of needing to open multiple windows for each Web site you visit, you can see multiple sites within one window. And if it's another category of multiple windows that's causing you annoyance, you'll be happy to know that Firefox includes an integrated pop-up blocker.

Another cool feature is Live Updates: When content changes on a site you

have bookmarked and the site has a live feed (common for news sites), you can have updates delivered to you as soon as the site content changes.

Firefox contains several notable security features, such as the security updates that automatically download to your browser and the one-click Clear Private Data tool, which deletes cookies, data for Web forms, browsing history lists, and other personal data. There's also support for Web sites that allow content and applications to be read out loud. And the bonus is that all of this is wrapped in a package that is fast and customizable.

The software isn't without its drawbacks, however. It lacks common browser plug-ins, such as Adobe Acrobat Reader, so you'll be prompted to download and install them yourself. Plus, it blocks ActiveX content by default.

Netscape 8.x

Centuries ago in Internet time, Netscape's Navigator once occupied the same place within the market that IE holds today. Navigator was the dominant browser in the early to mid-1990s, and even though IE now claims that spot, there are plenty of reasons to use a Netscape browser.

If security is a top concern of yours, you might want to check out the list of potentially harmful sites that Netscape 8.x (browser.netscape.com /ns8) provides. If you happen to visit sites that may harm your computer, Netscape 8.x notifies you automatically. Additional security features include Site Controls, which let you indicate how much you trust a particular site, as well as a rendering engine that displays a site based on Netscape's evaluation of its trustworthiness.

You can customize up to 10 different browser toolbars, condense each one into a single button with the new

IE Shells

You may be familiar with so-called "alternative" browsers that—technically speaking—aren't completely distinct from IE. Instead, they're what's known as IE shells: They overlay IE or use its rendering engine (software that takes Web content and formatting info to display the formatted content) and add features. Here are a few examples, but you should have a backup and set a restore point before using them.

Avant 10.1 (free; www.avant browser.com). The folks at Avant estimate that more than 85% of all Web page flash animations are advertising. If these programs are slowing down your browsing experience, you can use Avant to block them with one click. Other features include tabbed browsing, a full-screen mode, and a built-in search engine.

iRider ($29; www.irider.com). iRider lets you perform searches on multiple search engines simultaneously, "pin" pages to keep them from mistakenly closing, and download multiple pages in the background while you're viewing the current one. One warning, though: It's incompatible with the popular Ad-Aware antispyware application.

Maxthon (free; www.maxthon.com). Maxthon closely resembles IE, but it also adds features such as tabbed browsing and support for third-party plug-ins, as well as the ability to easily delete cookies, the cache, and your browsing history.

Multibar feature, and create your own toolbar by grouping similar buttons. Plus, you can display feeds inside toolbars. Netscape features tabbed browsing and the ability to place pop-ups in a single tab, which you can then control or block completely. And, along with a home page, you can create a home tab, which opens multiple sites whenever you launch the browser.

But if you rely on RSS (Really Simple Syndication) feeds, you'll want to download a RSS client (often called an

aggregator) or use another browser because Netscape 8.x doesn't have a built-in aggregator to request feeds.
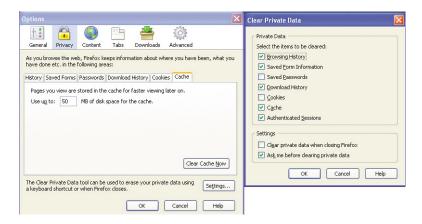
Opera 8.5

With a name like Opera (www.opera.com), you might expect this browser to really "sing." Well, it may not do so literally, but it does speak to you. The Opera Voice feature lets you control the interface by talking, provided you have a microphone and are using a PC running Windows XP. When you give it the command to speak, Opera can read site content and email messages. And, you can control navigation with commands such as "Opera back" or "Opera next link."

Another unique feature is its set of Opera skins. You can download dozens of skins, from the Spartan (a basic gray Concrete) to the flashy (FauxS Emerald With Reflections, which is one of our favorites). The browser is customizable in numerous other ways, as well. For instance, you can add and remove toolbars, and you can move search fields and buttons.

Plus, Opera includes tabbed browsing, pop-up blocking, and a password manager that can store multiple logins for the same page. Protective features include providing security information about Web sites within the address bar, as well as offering users the ability to configure the history file and the cache, so they clean themselves out automatically when you close the browser.

Amaya 9.3

And now, it's time for a quick peek at something a tad different. If, during your Web browsing, you've ever thought to yourself, "I wish I could create a site like that," you'll want to take a look at Amaya (www.w3.org/amaya). Yes, Amaya is a Web browser with typical features such as tabbed browsing and special features such as annotation tools, which make the software particularly useful for researchers.

Firefox's Clear Private Data feature makes it easy to erase personal information concerning your recent Web travels.

It has its quirks, though, such as requiring the user to right-click to follow a link. Plus, there were several pages we tested that loaded comparatively slower than they did in IE.

But the real reason to check out Amaya is its Web-authoring tools. The W3C (World Wide Web Consortium), along with the French National Institute for Research in Computer Science and Control, created Amaya as a tool for showcasing new Web technologies and helping site designers create valid Web pages. If you revel in terms such as "cascading style sheets" and "structured editors," we recommend giving Amaya a try.

You Have A Choice

All the Web browsers we mentioned here may be described as IE alternatives, but they aren't backup or substitute browsers—each one can stand on its own as a full-featured application. After trying Firefox, Netscape, Opera, and/or Amaya, you may soon be relying on one of those applications as your primary Web-surfing tool and using IE as your "alternative" browser. ▮

BY HEIDI V. ANDERSON

FOR SUBSCRIBERS: MORE ON THE WEB

"Browsers: Find Content Within Pages While Using Firefox Or Internet Explorer"
www.smartcomputing.com/scmar06/browsers
Want to make the most of your browser? Each month, we publish a Quick Study article online that covers a variety of browsers. See this recent article for tips on finding terms within Firefox and IE.

"Buck The IE/OE Trend: Exploring Alternative Browsers & Email Clients"
www.smartcomputing.com/scjun05/alternatives
Just as IE isn't the only Web browser out there, Outlook and Outlook Express aren't the only email clients, either. This article includes a comprehensive overview of alternative browsers and email programs you may want to check out.

"Browsers: Manage Third-Party Add-ons In Internet Explorer"
www.smartcomputing.com/scapr05/browsers
If you're happy with IE but want to spice it up a little or add some extra functionality, you can do so with the use of third-party add-ons.

Manage
Multimedia Mishaps

Don't Let The Web Spoil Your Audio & Video

You're cruising along a winding back road, wind blowing through your hair, sun streaming through the sunroof, when suddenly—WHAM!—a flat tire ruins your blissfully relaxing drive. Although they aren't quite as dangerous or startling, flat tires also occur on the Web, and they can be just as frustrating and difficult to repair.

For example, picture yourself reading a news article or a forum thread that includes a link to a streaming video or audio file. The story was great, so the multimedia would truly complete the picture, but when you click the link, nothing happens. This precise situation happens to most Web users at one time or another, and you won't always see error messages that describe what you're doing wrong and/or how to fix the problem.

However, being on your own isn't such a bad thing when it comes to multimedia mishaps because you have the power to arm your PC with the necessary tools and settings so that you won't encounter those flat tires again, and you'll even enhance your multimedia experience in the process of fixing the problems. Read on to discover how to repair the most common Web-related multimedia mishaps.

Video Mishaps

Problem: A "red X" appears in place of the images I want to see.

Solution: One of the most notoriously frustrating multimedia mishaps occurs when Internet Explorer displays a white box with a red X instead of the intended graphic. This error occasionally happens when there's a link-related problem with the graphic that can't be fixed on your end. But when you find that the red X appears on multiple, unrelated Web sites, chances are pretty good that the problem is with your PC, not with the sites.

Even for experienced PC users, the red X can be difficult to diagnose because any of a wide range of issues can cause the problem. But like other browser-related prob-lems, the red X problem is one you can often solve by targeting the basics.

First, address the potential corruption of temporary Internet files by clearing your IE cache. Open the Tools menu, click
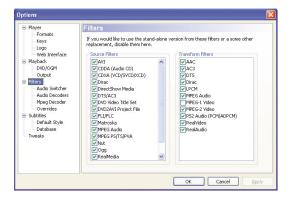
If you're seeing the dreaded "red X" instead of the associated images, empty your temporary Internet files folder and consider decreasing the folder size to 50MB or less.

Internet Options, choose the General tab, and click the Delete Files button. In the Delete Files dialog box, select the Delete All Offline Content checkbox, click OK, and then click OK in the Internet Options dialog

Despite its diminutive appearance, the free Media Player Classic supports an astounding number of video formats and plays them all with ease.

box. If this solves the problem, return to the Internet Options dialog box, click the Settings button, and check the amount of drive space you're currently allowing under Temporary Internet Files Folder. If the allocated space is more than 50MB, reduce the setting to 50MB to prevent the potential corruption of your temporary files by keeping the folder lean and mean. In fact, some power users even reduce the folder size to 10MB or less with no impact on browsing performance, so don't be afraid to tinker with the size of the temporary Internet folder.

Although less likely, incorrect IE settings also can invite the dreaded red X to infest the Web pages you visit. If clearing your IE cache doesn't work, open the Tools menu, click Internet Options, choose the Advanced tab, and confirm that both Show Pictures and Play Animations In Web pages (under Multimedia) have check marks. If not, select their checkboxes and click OK.

Certain settings in software-based firewalls and pop-up ad-blocking software also can prevent images from

displaying correctly, so try disabling these programs one at a time to resolve the problem. If your browser runs properly after disabling one of these programs, check the software manual or the developer's Web site for a solution to the graphics problem, or try modifying settings yourself until images display correctly. Before changing settings in any security program, be sure to write down your original settings just in case you run into problems later.

A box with a red X may not necessarily indicate a missing image, but instead stem from a missing Java applet, which is sometimes accompanied by the following error message in the lower-left corner of your browser window: "Loading Java Applet Failed." If you see this message, open the Start menu, click Control Panel, and double-click Java (in Windows XP, use Classic View). On the General tab, click the Network Settings button and then confirm that Use Browser Settings is selected in the Network Settings dialog box. If not, select it, click OK, and then click OK to close the Java dialog box.

Problem: Fuzzy images appear on my high-dpi (dots-per-inch) screen.

Solution: Software can't always keep pace with new hardware devices, and such is the case with WinXP and high-dpi screens, which are increasingly included with newer laptops. Because this OS (operating system) doesn't natively

support screens above 96dpi, Web pages that specify pixel sizes for items, such as containers and text, might appear fuzzy and unreadable. But if you're using a high-dpi screen and encounter this issue, you can modify the Windows Registry to force WinXP and IE to properly adjust the picture automatically.

(*NOTE: Making changes to the Registry can have disastrous effects on your PC if you're not careful, so be sure to back up the Registry before modifying it. See support.microsoft.com/kb/322756 for more information on Registry backups.*)

To open the Registry Editor, click Start, click Run, type **regedit** in the Open field, and click OK. Next, browse to the following Registry key: HKEY_CURRENT_USER\SOFT WARE\MICROSOFT\INTERNET EXPLORER\MAIN. With the Main folder selected, click Edit, select New, and click DWORD Value. Type **USEHR** for the new value name and press ENTER. Double-click the new value, change the Value Data from 0 to 1, click OK, close the Registry Editor, and restart your computer. The fuzzy images and text should now appear normal, even when using a high-dpi setting.

Problem: The video content I'm trying to view will not play.

Solution: When you click a video link on a Web page and the clip doesn't launch, or it does launch your video player but nothing appears on the video screen, the most common culprit is a missing codec. **Codecs** compress and decompress video and audio to make the data suitable for streaming or downloading, but there are

If you're unable to hear sound clips or audio streams, make sure your speakers are on, turned up, and your volume is correctly configured in Windows.

many different codecs. If you don't have the correct codec installed on your PC to view a particular video, you won't be able to watch it until you get the codec.

If you're accustomed to using WMP (Windows Media Player) to watch video, consider using a third-party media player that bundles commonly used codecs and other files that enable them to handle varied types of media. Media Player Classic (free; sourceforge.net/projects/guliverkli) can play almost anything under the virtual sun, as can VLC (free; www.videolan.org/vlc).

If you're partial to WMP or if you run into playback problems with a third-party player, use KC Softwares' VideoInspector (free; www.kcsoftwares.com) to automatically detect the codec required by the video file you're trying to play. You can download free codec packs from www.freecodecs.com/download/Codec_Pack_All_in_1.htm and www.k-litecodecpack.com.

Audio Mishaps

Problem: The audio content I'm trying to access won't play.

Solution: If an audio stream or sound clip doesn't play when you click it, first check the obvious. Make sure that your speakers are on and the volume knob is turned up, and then make sure the sound is configured correctly in the Sounds And Audio Devices dialog box. Open the Start menu, click Control Panel, double-click Sounds And Audio Devices, and on the Volume tab, make sure the Device Volume slider is set to High and the Mute checkbox isn't selected.

Still no luck? Check your hardware to make sure everything is installed and running as it should. Right-click the My Computer icon on your Desktop, click Properties, choose the Hardware tab, and click Device Manager. Double-click the Sound, Video And Game Controllers entry and ensure that your video card appears in the list of devices. If it's missing, or if there's a question mark or exclamation point next to the listing, you should reinstall your sound card and then download and install the latest sound drivers. Or, if you're using the integrated sound technology included with your motherboard, download the latest sound drivers from your motherboard manufacturer's Web site and install them.

Problem: The audio level constantly changes.

Plug In To Browser Enhancement

Many multimedia roadblocks occur when there's a key browser component missing, such as a plug-in. **Plug-ins** are small programs that provide additional functionality to your browser, and by installing the most popular plug-ins before you encounter problems, you'll be far ahead of errors before they have a chance to stop you in your tracks.

Flash Player. Web sites increasingly use animated content powered by Macromedia Flash technology, and although the company's Flash Player (www.macromedia.com /software/flashplayer) is already bundled with the latest Internet Explorer version, it's not a bad idea to install the most recent version of this plug-in, particularly if you're having problems with Flash animations.

QuickTime. Although there are better players for viewing AVI (Audio-Video Interleaved) and MPEG (Moving Picture Experts Group) files,

you'll need QuickTime (www.apple.com/quicktime/download/win.html) to view MOV video files. But if you don't like the bundled iTunes software you're forced to download with QuickTime or the memory-sapping software that runs in the background, consider using QuickTime Alternative (www.free-codecs .com/download/quicktime_alternative.htm). This program not only includes all the QuickTime codecs, but it also has Media Player Classic, a highly flexible viewer that can play almost any video format, including DVDs.

RealPlayer. Although RealNetworks claims that its RealPlayer

(www.real.com) has the "best video and audio quality ever," its actual quality pales in comparison to other players and media formats. But love it or hate it, you'll need RealPlayer to view and listen to RAM and RM streams—or not; you can opt for Real Alternative (www.free-codecs.com/download/real_alternative.htm) instead, which uses the aforementioned Media Player Classic and RealMedia codecs to play Real content.

Shockwave Player. Also from Macromedia, Shockwave technology enables in-browser interactivity, including games and media-rich content such as presentations and movies. But unlike Flash Player, Shockwave Player (sdc .shockwave.com/shockwave/download/download.cgi) doesn't come bundled with IE, so you'll need to install it in order to view and use Shockwave content. ∎

When you're surfing the Web and dealing with audio or video that won't play as intended, you should always document your solution when you find it.

Solution: See all those buttons on the perimeter of your keyboard? Some of them just might save you plenty of frustration when playing different Web-based audio clips that inevitably vary in volume. Most multimedia keyboards include volume and mute buttons, and some even include rollers that let you easily adjust the volume up or down by rolling the adjuster. (You might need to configure your keyboard software to use the roller for volume, though.)

By using these tools, you can always leave your speakers on and set them to a medium volume, and then simply adjust your speaker volume using the keyboard. With a little practice, you'll soon be able to drop the volume quickly without even looking directly at the control, thereby saving your ears from sound clips that seem to dwarf the decibel level of late-night TV commercials.

Problem: The digital music streams I download sound terrible.

Solution: You can find plenty of incredible music streams on the Web that play song after song of the music you love. However, what isn't so lovely is the sound quality of many streams featured at various music-related sites.

For example, the free streams on Live365 (www.live365.com) top out at a measly 64Kbps (kilobits per second), whereas CD-quality streams at SHOUTcast (www.shoutcast.com) are available that even let you sort the streams according to bit-rate quality. Also, SHOUTcast lets you listen to the streams using Winamp or other music players, so you can use your own equalization settings to get the best sound possible.

Mishaps With Plug-Ins

Problem: The QuickTime movies I play are often choppy.

Solution: Because QuickTime automatically attempts to play the movie

Most multimedia keyboards feature configurable buttons that let you easily control volume, which can save you plenty of hassle when dealing with Web-based sound clips.

versions that most closely match your connection speed rating, you might end up viewing movies that display less-than-acceptable visual quality. On the other hand, the movies that QuickTime plays for some users might be so slow that they're impossible to watch. You can change the criteria QuickTime uses to play movies by altering your connection speed setting in the application.

In the QuickTime interface, click Edit, Preferences, and QuickTime Preferences. On the Streaming tab, click a connection speed from the Streaming Speed drop-down menu. Because there are 10 available options (other than Automatic), make sure you know the speed of your connection before making a selection because an accurate selection will help QuickTime properly gauge the correct speed of streaming video for your PC. If you're not sure of your connection speed, use an online tool such as the Speakeasy Speed Test

(www.speakeasy.net/speedtest) and choose a server that's closest to your location. After choosing your connection speed on the Streaming tab in QuickTime, click OK to confirm your selection.

If manually setting the connection speed doesn't help, you can return to the auto detection option by choosing Automatic from the Streaming Speed drop-down menu. Also, if you have a broadband connection, make sure that you're using the Instant-On option (also on the Streaming tab), as this can drastically reduce the amount of buffer time when viewing streamed video.

Problem: Flash or Shockwave content doesn't play correctly.

Solution: Macromedia Flash Player tends to run smoothly most of the time, but when it does encounter a persistent playback problem, finding the source of that problem can be challenging. In most cases, you're better off uninstalling Flash Player, downloading the most recent version, and reinstalling it.

To remove Flash Player from your computer, download the Macromedia Flash Player Uninstaller (download .macromedia.com/pub/flashplayer/installers/8/uninstall_flash_player.exe), close all open instances of your browser, and run the uninstaller. Next, open your browser, surf to Macromedia's Flash Player page (www.macromedia.com/software /flashplayer), and follow the instructions for installing the newest version of the Player.

In addition, you can repair most Shockwave Player problems by uninstalling the software and reinstalling the latest version. To uninstall Shockwave, browse to C:\ WINDOWS\SYSTEM32\MACRO MED\SHOCKWAVE 10, open the Unwise.exe file, and follow the directions to uninstall the program. You'll find the most recent version of Shockwave Player at

Tired of listening to music streams that sound like garbage? Step up to SHOUTcast, which features high bit-rate streams you can play in powerful players, such as Winamp.
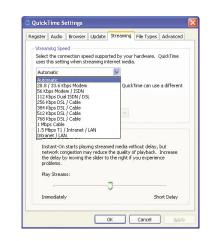
sdc.shockwave.com/shockwave /download/download.cgi.

To test whether your current versions of Flash Player and Shockwave Player are operating as they should, visit www.macromedia.com/shock wave/welcome and follow the on-screen instructions.

Make The Most Of Mishaps

When you're surfing the Web and dealing with audio or video that won't play as intended, you should always document your solution when you find it, even if it's just to keep some hints on a note card. These hints can save you time in the future if you need to reinstall Windows or other software because you're bound to see the mishaps again if you don't have the proper settings configured or software installed.

Also, remember that not all multimedia problems are necessarily due to trouble with your computer, so don't fret if you follow the steps outlined here and still can't find a solution. Web site administrators have faults just like the rest of us and can easily upload corrupted video, audio, or

Choppy QuickTime video could indicate that there's trouble with the program's ability to detect your Internet connection speed. Specify your precise speed in the QuickTime Settings dialog box.

other content that won't appear correctly via our browsers or play nicely with our media players, regardless of what we do. If this is the case with the problem you've run into, search the Web for another source of the audio or video—and download one that actually works. ▐▌

BY CHRISTIAN PERRY

It's A Jungle Out There

Security Problems & Solutions For Web Surfers

Think dark alleys are dangerous? Try surfing the Web sometime. The number of digital threats is always growing, and users must stay one step ahead of wily crackers if they want to maintain secure computer systems.

But what if a breach has already occurred? Fortunately, users can resolve most security-related problems with relatively little effort.

Problem: My PC is inundated with pop-up ads, even when I'm not online.

Solution: A pop-up ad is an unsolicited advertisement that appears in its own window on-screen. Some of these ads are generated by legitimate Web sites as a way of earning revenue that supports site content. Such ads generally appear alone and in conjunction with online activity, such as opening a Web page. Other pop-up ads are generated by spyware and adware agents for the purpose of culling personal information about your online habits; promoting undesirable products, including pornography and get-rich-quick schemes; or providing crackers with easy access to your computer system. These ads tend to come in droves, bombarding a Desktop with a series of ads that may be unrelated to whatever is happening online.

You can eliminate the ads that fall into the nefarious category by running antispyware, such as Webroot's Spy Sweeper ($29.95; www.webroot.com) or CA's eTrust PestPatrol Anti-Spyware ($29.95; www.ca.com). Utilities such as these will identify and destroy the underlying spyware or adware generating the steady stream of pop-up ads. Next, you should install ad-blocking software to clean up any other pop-up ads that still try to get through. Ad-blocking software typically installs itself on the browser toolbar where it can monitor incoming traffic and squash unsolicited content before it appears on-screen.

You can get free ad-blocking software by downloading a toolbar such as Yahoo! Toolbar (toolbar.yahoo.com) or by running the Pop-Up Blocker component of the latest Internet Explorer and Windows XP SP2 (Service Pack 2). Shareware ad blockers, which you can purchase for $20 to $30, are more effective at blocking unwanted content and provide additional features, such as the ability to suppress banner ads, background sounds, and other unnecessary content. EdenSoft's PopUpCop ($19.95; www.popupcop.com) and PopUpSentry.com's Pop-Up Sentry! ($29.95; www.popupsentry.com) are two of the best.

Problem: My browser's home page has changed for no reason.

Solution: Your browser has been hijacked. A browser hijacking occurs when a spyware or adware agent employs a script to modify the browser's home page setting. In many cases, the new home page is either a pornography site or a search engine that directs traffic to online advertisements. A browser hijacking also may entail the addition of unsolicited toolbars in the browser window or links in the

Five Steps
To Better Security

1 Install an antivirus utility. Install antispyware. Install a firewall. Use and regularly update them.

2 Keep your Web browser, Windows, and all security software current with the latest updates, service packs, and free upgrades. Take advantage of automatic updating tools whenever they're available.

3 Don't just wonder about how secure your wireless Web connection is; take five minutes and configure your network hardware for optimum protection.

4 Choose passwords that consist of both letters and numbers and are at least six characters long. Change them frequently.

5 Stay away from unfamiliar Web sites. Ignore email from unrecognized senders. Delete unsolicited files that make it to your PC.

Favorites folder. It can modify your preferred search engine, too.

If you use IE, you can reset the home page by opening the Tools menu, selecting Internet Options, choosing the General tab, typing the URL of your preferred home page in the Address field, and clicking OK. Remove an unwanted Favorites link by opening the Favorites menu, selecting Organize Favorites, perusing the contents of the Favorites folder, highlighting the unwanted link, and clicking Delete. And in most cases, you can use the Control Panel's Add Or Remove Programs function to uninstall foreign toolbars. Also, restore your search engine by clicking Customize in the browser's Search pane, selecting the Use One Search Service option, and specifying the search engine in the Choose The Search Service drop-down menu.

Doing all of this to reset items isn't enough, however. Such band-aid fixes may resolve the situation temporarily, but they won't eradicate the underlying adware or spyware that hijacked the browser and caused all of the trouble in the first place, so close your browser and run antispyware as soon as possible. While you're at it, run an antivirus utility, such as Norton Anti-Virus ($39.99; www .symantec.com) or McAfee VirusScan ($39.99; www.mcafee .com), which will remove the **Trojan horse** (a malicious program disguised as something else, such as an enticing email attachment) that smuggled the malware into your PC.

Problem: When I access my broadband Internet connection through my wireless network, sometimes Web pages load quickly, and other times they load slowly.

Solution: A lagging wireless connection may occur for any number of reasons, including a couple that pertain to system security. For instance, a spyware infection may put the brakes on surfing performance as it collects data about your online activities. Run an antispyware utility to identify and eradicate any spyware contaminating your PC.

You also may notice a significant decrease in data throughput if your wireless network is usurped by unauthorized users operating—either intentionally or incidentally—within range of your unsecured wireless network. These users can surf via your Internet connection for free and may even have access to your personal data and files. The practice of intentionally tapping into a wireless network is known as **drive-by hacking** or **wardriving** because the users sometimes position themselves curbside in idling vehicles. Drive-by hackers also work out of homes and offices by targeting networks in nearby buildings or rooms.

The best way to secure a wireless network against drive-by hackers is by activating your network's WPA (Wi-Fi Protected Access) or WEP (Wired Equivalent Privacy) settings. Refer to the users manual that shipped with your networking equipment for detailed instructions on how to accomplish this. After you secure your network so unauthorized users can't access it, you'll have its throughput all to yourself.

Problem: My computer is acting funny lately. My online connection is slow, and I get mailer daemons reporting undelivered messages to people I don't know. The hard drive also seems to be spinning all the time, and sometimes the keyboard

The easiest way to protect a wireless network from a security breach is by enabling its WPA (Wi-Fi Protected Access) settings. Each network is different, though, so refer to the users manual for detailed instructions.

fails to respond to my tapping. What's going on?

Solution: As a general rule, you should view any type of unusual system behavior as a symptom of a virus infection. That means your first response should be a virus scan. If you don't have an antivirus utility, get one. And if you haven't updated your antivirus utility in more than a year, renew your subscription as soon as possible.

But that's just for starters. The particular symptoms you cited are common to zombies. In this sense, a **zombie** is a computer that functions as a passive front for a backroom cracker who wants to commit vile acts of digital vandalism without getting caught. The cracker typically gains control of a system or systems by sending out a Trojan horse. When an unsuspecting user opens the Trojan, it installs its wicked payload on the PC and begins

transmitting data back to the cracker, usually by exploiting a security vulnerability in the user's OS (operating system) or Web browser.

After the cracker attains access, he commandeers the infected system—the zombie—and its available resources, usually for the purpose of sending spam or committing **DoS attacks** (**denial of service attacks**; acts of digital aggression, whereby an attacker floods a particular computer or server with network traffic). A DoS attack renders the victim's system useless and places a significant burden on the zombie machine caught in the middle.

A virus scan should eliminate the Trojan horse that created the zombie. You can protect your system in the future by installing a firewall. A firewall not only monitors incoming traffic for unauthorized users but also watches for outgoing traffic from programs that don't normally transmit data across the network. In this way, a firewall can identify a DoS attack emanating from your PC, alert you to what's happening, and stop the offending program from continuing the attack.

Finally, users should update their software as often as developers make updates available. Software developers release these updates to fix bugs, add product enhancements, and—perhaps most importantly—patch security gaps. By staying current on updates, you can ensure that your system doesn't fall prey to a zombie attack.

Problem: When I try to log in to some of my online accounts (such as those involving financial data, health care, shopping sites, etc.), I receive access-denied messages indicating that my usernames or passwords are incorrect.

Solution: Before jumping to any security-related conclusions, verify that you typed the correct username and password, spelled them correctly, and used the proper case (upper or lower) for each character. Next, assume that you've forgotten the information and request that the correct username and

A missed Windows update is a golden opportunity for crackers to violate your PC's security. Stay current by activating the Automatic Updates feature (via the Control Panel) in Windows Me and Windows XP.

password be sent to your email address on record. Hopefully, you'll receive the information and recognize it. If not, you have a problem.

If it appears that someone has changed your username and/or password without your permission—most likely as part of an identity theft—immediately contact the company that provides the account in question and explain the situation. The company will probably close your account and require you to file a report with the

local police department, one of the three major credit bureaus, as well as the FTC (Federal Trade Commission). You also should close—at least temporarily—any vulnerable online or offline accounts you have. While you're at it, address the source of the trouble. In a case involving stolen Web identities, the culprit is usually a **keyboard logger**, which is a type of spyware that records your keyboard actions and sends that info across the network to crackers. The crackers then sift through the resulting log for passwords, usernames, credit card numbers, Social Security numbers, and any other piece of personal information they can get their grubby hands on.

Viruses, worms, and Trojan horses are capable of carrying keyboard loggers to unprotected computers. To eliminate this type of threat, install an up-to-date antivirus utility and scan your system for malicious code. You also should install and run antispyware. After eradicating the keyboard logger, invest in a firewall application that will notify you if an unrecognized program tries to transmit data—such as a keystroke log file—across the Internet. ❚❚

BY JEFF DODD

FOR SUBSCRIBERS: MORE ON THE WEB

"Security: Enhancing IE Security"
www.smartcomputing.com/scapr05/security
Internet Explorer is the browser most home and small-office computer users rely on to surf the Web. This article discusses how you can utilize IE's basic security features for safer surfing.

"Line Of Defense: Protect Your System With Internet Security Suites"
www.smartcomputing.com/scjul05/defense
When it comes to Web security, the best defense is a good suite of protective utilities. This software roundup covers some of the most reputable programs on the market, enabling you to pick one that meets your needs.

"Wireless Network Security: Protect Your Air From Freeloaders & Intruders"
www.smartcomputing.com/scnov05/wireless
The number of wireless users is steadily increasing—and so is the number of threats to your network and data. Find out the best way to protect your personal wireless network from uninvited guests.

Good Connections

Get The Vibe For Fast, Reliable Internet Access

Regardless of whether you have broadband access or are still sipping data from the Internet using a dial-up connection, your connection can probably run faster and with fewer service disruptions. Now, to determine whether the responsibility for a slow or glitchy connection lies with your computer, the Internet in general, your ISP (Internet service provider), or the computer on the other end, there are plenty of tools out there you can use to find out and get the most out of your Internet connection.

Start With The Hardware

You're never going to get a good connection if the cable or phone line (depending on the service you use) coming into your house is shoddy, so that's the first thing you should check. If you use a cable modem, turn on your TV and look at channels 2 through 12. If any of them consistently display static, wavy lines, or other anomalies that dramatically affect the picture quality, contact your cable provider and tell it to have a technician come check the line because there's a good chance that the line is unstable enough to cause problems with your cable Internet connection.

Dial-up and DSL (Digital Subscriber Line) users should do the same thing with their phone lines. If you fall into this category, pick up your phone, press a number, and listen for severe static, clicking, or other noises that shouldn't be there. If there's a problem, contact the phone company to see if one of its technicians can fix the line on the outside of the house and then consider purchasing filters that can reduce the unwanted noise.

The Linksys BA2LF ADSL In-Line Phone Filter ($19.99; www.linksys.com) is a good example of such a filter, and it plugs directly into the phone socket. Note that if you use DSL, you may need to install a filter on every phone outlet in the house to properly use the service, so see if your ISP will provide the hardware.

If you use a dial-up modem, contact your ISP and ask the company if its modems support speed-enhancing technology, such as V.90 or X2. If so, make sure you use a modem that supports the same technology, and your connection should improve dramatically.

A filter, such as this one from Linksys, can reduce noise on a phone line and improve a modem or DSL (Digital Subscriber Line) connection.

For maximum performance, it also helps to properly configure your dial-up modem or your NIC (network interface card) if you have broadband. For Windows XP users with dial-up modems, open the Start menu, click Control Panel, click Switch To Classic View (if necessary), and double-click Phone And Modem Options. Choose the Modems tab, click the entry for your modem, and click Properties. This time, choose the Modem tab and use the Maximum Port Speed drop-down menu to select a speed that's approximately twice as much as what your modem supports. (For example, select 115200 if you have a 56.6Kbps [kilobits per second] modem.) Choose the Advanced tab, click Change Default Preferences, and make sure the Flow Control box is set to Hardware before clicking OK twice and resetting the computer.

For WinXP users with NICs, open the Start menu, right-click My Network Places, and click Properties. Right-click Local Area Connection, click Properties, click Configure, and choose the Advanced tab. Select the Link Speed & Duplex setting on the left and use the drop-down menu to select the entry that matches the maximum speed of your NIC (which is usually the 100Mbps/Full Duplex setting for most modern devices). Click OK and reboot the computer.

Tweak Windows

Windows has a lot to do with the efficiency of your modem or NIC, and there are several settings you can adjust to smooth the connection. It's very difficult to edit things manually, so we recommend that you download

For best results, you should use twice your modem's rated speed in the Control Panel settings.

an all-in-one tweaking tool such as CableNut (free; www.cablenut.com) and use preconfigured settings. Download the software, double-click the downloaded file, follow the instruction prompts, and double-click the CableNut icon on your Desktop to get started.

The first step is to make a backup of the Windows Registry before you make any edits. The **Registry** is a database of Windows and software settings that your OS (operating system) absolutely needs in order to function, so making a backup is critical. From the CableNut interface, click Registry, click Backup Registry, give the file a name, select a location to save the file, and click Save. If you need to restore the original Registry settings later, click Registry, click Restore Registry, click the icon for the file you saved, and click Open. Restart the computer when you finish.
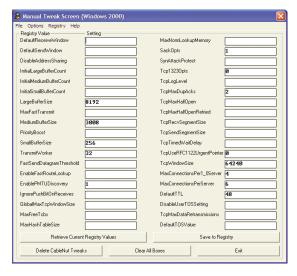
Now you can load the preconfigured tweak file. Click File, click Open Custom Settings File, and double-click the CCS folder. Open the folder that matches your connection type (such as 56K for dial-up users) and double-click the file that matches your OS. (WinXP users should double-click the file that has "2k" somewhere in its name.) The Cable and ADSL files also are separated into Fast and Normal versions, so you should use Fast first, see how it works, and then repeat this process to

switch to Normal if the connection is unstable. The suggested numbers appear in the main window, and you can click Save To Registry to apply the changes. Reboot the computer, and Windows will use the new settings.

Deal With Disconnects

Few things are more frustrating than a dropped Internet connection, but there are several things you can try to get data flowing again. If your cable or DSL connection quits, for instance, try resetting the modem. Sometimes this requires holding down the power or reset button while you unplug the power cord, but check the documentation that came with the device or contact your ISP for specific instructions.

If the diagnostic LEDs (light-emitting diodes) on the front of the cable or DSL modem indicate that the trouble is on the PC side of the connection instead of with the connection to the wall, check the lights on the back of your NIC to make sure it is working properly. If it isn't, just purchase a replacement because NICs are inexpensive and very easy to install. There are even adapters that use a USB (Universal Serial Bus) interface—such as the NETGEAR FA120

CableNut automatically modifies a number of connection settings that are scary to edit manually.

($34.99; www.netgear.com)—that install without requiring you to even open the computer's case.

Dead dial-up connections are sometimes the victim of Windows, which can be configured to hang up and end the connection if no data passes over the line for a fixed period of time. To change this, WinXP users can click Control Panel from the Start menu, click Switch To Classic View (if necessary), and double-click Phone And Modem Options. Choose the Modems tab, click the entry for the modem, click Properties, choose the Advanced tab, and click Change Default Preferences. In the Call Preferences section on the General tab, deselect the checkbox next to Disconnect A Call If Idle For More Than X Mins and click OK. After making this adjustment, just remember to hang up your modem manually, or you may unwittingly tie up the phone line for hours.

If your connection is simply poor and there's nothing you can do about it, you can install a download manager. These programs keep track of the files you download and let you resume the download from where it left off if the connection is severed partway through, saving you a lot of time. A good example in this category is Download Express (free for noncommercial use; www.metaproducts.com), which also functions as a download accelerator (which we'll cover in the next section).

Turbocharge Your Connection: Are Internet Accelerators Worth It?

You've heard the promises: "Make your Internet connection 500% faster!" "Save time and money!"

So, perhaps all it takes for a faster connection is the proper software, right? That depends. Most of these Internet accelerators fall into two broad categories: **download accelerators** that grab multiple parts of a file at the same time, and **Internet accelerators** that

```
C:\WINDOWS\system32\cmd.exe                                _ □ ×

Microsoft Windows XP [Version 5.1.2600]
<C> Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\Me>ping www.google.com

Pinging www.1.google.com [72.14.203.99] with 32 bytes of data:

Reply from 72.14.203.99: bytes=32 time=23ms TIL=245
Reply from 72.14.203.99: bytes=32 time=28ms TIL=245
Reply from 72.14.203.99: bytes=32 time=26ms TIL=245
Reply from 72.14.203.99: bytes=32 time=24ms TIL=245

Ping statistics for 72.14.203.99:
    Packets: Sent = 4, Received = 4, Lost = 0 <0% loss>,
Approximate round trip times in milli-seconds:
    Minimum = 23ms, Maximum = 28ms, Average = 25ms

C:\Documents and Settings\Me>_
```

The PING command is a handy method for determining which point along the data path is responsible for slowing things down.

compress the Web page data you request so that it travels faster online. Both of these categories have several pros and cons.

LeechGet (free or $20 for advanced version; www.leechget.net/en) is a popular example of the type of accelerator that downloads multiple parts of a file simultaneously. Your Internet connection is rarely fully utilized, even when downloading large files. The theory behind this technology is that download speeds can increase

dramatically if the software breaks large files into pieces, makes multiple requests to the same computer at the same time, and downloads each piece simultaneously using multiple connections. In practice, we've never achieved the speed these products typically advertise, and they're worthless for normal Web browsing. Although these products try to get the most out of your connection, the problem is that many download sites don't let you use these accelerators.

FOR SUBSCRIBERS: MORE ON THE WEB

"Basic Troubleshooting: Dial-Up"
www.smartcomputing.com/scsep04/dialup
For those of you having trouble with that ol' dial-up modem of yours, here's a list of troubleshooting tips to help you generate more speed online.

"How To Install Cable & DSL Modems"
www.smartcomputing.com/scoct04/modems
When you're ready to make the jump to broadband Internet service, read this article to find out how to get your system ready for cable or DSL (Digital Subscriber Line).

"Network & Internet Nightmares: When All Of Life Is A Disconnect"
www.smartcomputing.com/scjan04/network
Like anything in computing, problems do come up, so it's good to have an article such as this in your arsenal to quickly get your system back up and surfing the Web again.

Products such as this FA120 from NETGEAR let you add networking capabilities to your computer using a common USB (Universal Serial Bus) connection.

Internet accelerators such as ON-SPEED ($49.99 per year; www.onspeed.com) use data compression to pack all of the files from a Web page into a much smaller amount of space. The software on your end of the computer then unpacks the files and displays them via your Web browser. If the compression routine can pack a 100KB text file into 10KB of space, the theory is that you should be able to transfer that text file to your computer in one-tenth of the normal amount of time. Therefore, if you're using a metered access plan that charges you based on the amount of data you download, the benefits are twofold because you receive much larger files on your end than actually pass through the connection, so you pay less, and you receive those files faster.

The main problem with a service such as this is that everything must pass through the service's servers, which means that if you have a slow connection to its servers, everything slows down. In addition, this arrangement raises privacy issues because everything you type and everything you request passes through the service's servers, so make sure you closely inspect its privacy policy before installing this type of software.

Another problem is that most files created for Web pages are already optimized to the point where compression can't do much more to make them any smaller—even if the accelerator uses proprietary compression routines, as ONSPEED does.

A final major caveat is that certain Web sites expect requests to come directly from your computer, and when they don't (because ONSPEED or another accelerator is making them on your behalf), these sites think spyware is sending the requests. For instance, when we enabled ONSPEED on one of our test systems and tried to conduct a Google search, Google often refused to cooperate until we typed in an on-screen code to prove there was a human sitting at our computer.

We tested ONSPEED with a 3Mbps (megabits per second) cable broadband connection, and the results were spotty. Oftentimes, just connecting to the sites we usually visited took much longer than normal, which negated the value of getting data faster once we got there. Overall, ONSPEED occasionally doubled the speed of the connection during our tests, but it also frequently cut the connection to as little as one-quarter of its typical speed because of the initial connection delay.

The service is much more viable for dial-up users, though. In many cases, the compression really makes a difference, and while testing a system with a dial-up connection, we commonly

If the Internet connection continually drops whenever you're away from your PC, turn off the idle disconnect setting.

doubled and occasionally tripled the effectiveness of our connection when routing everything through ONSPEED's servers, especially at text-heavy sites. Just remember that the price of $49.99 per year breaks down to about $4.17 per month, so if you can upgrade to a broadband connection at a similar cost, that's a much better option.
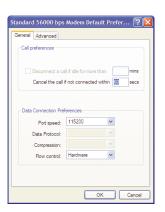
Make A Stink

If you aren't getting as much out of your Internet connection as you'd like, don't hesitate to call your ISP and demand that its staff look into it. Competition in the ISP market is fierce, and many companies will do just about anything to retain their customers. For example, if it seems to take a long time to connect to every site you visit, but files download normally once the connection is established, check to see if the ISP's DNS (domain name system) servers are to blame. (For more information see "On & Off The Job" on page 60.)

To investigate this, WinXP users can click Run from the Start menu, type **cmd** in the Open field, and click OK. Next, type **ping www.XYZ.com** (where *XYZ* is the name of the site you're having problems with) and write down the IP (Internet Protocol) address that appears in brackets next to the domain name you typed. Type that numeric address into your Web browser's address bar (don't forget the periods), press ENTER, and then see how quickly your browser connects. If it connects at a rate that's significantly faster than when you type the domain name, tell your ISP to upgrade its DNS servers. Slow connections are rarely your fault. ∎

BY TRACY BAKER

Search The Tech Support Center!

Computers, printers, and other technology are wonderfully helpful tools—when they're working properly. But there's nothing more frustrating than a stalled printer or an operating system that won't, well, operate. Even more frustrating is not knowing where to find answers.

Now it's easier than ever to find the information you need by searching SmartComputing.com's Tech Support Center. Simply enter a word in the Search box, and you'll find information on that topic from all areas of the Tech Support Center, including Solutions Knowledgebase, Security & Privacy Web Log, Basic Troubleshooting Articles, How To Install, and many more. Topics ranging from hard drives and printers to Safe Mode and the always-feared Blue Screen Of Death are all extensively covered in an easy-to-understand problem/solution format. Accessing this information is simple:

Go to SmartComputing.com and click the Tech Support Center logo.

Enter a subject in the Search box. Avoid using words such as "problems" or "malfunction" and use the Top Subjects links whenever possible.

Read through each section to find numerous articles on your search topic.

Subscribers, keep in mind that you can save all of the articles in your Personal Library for future reference. Simply log in: When you find an article you would like to keep, click the Add To My Personal Library link at the top of the page. Create as many folders as you like to keep your information organized.

We're your one-stop shop for computer problem-solving.

If you still can't find an answer to your question or problem after using our Tech Support Center, call us up and we'll help you through the problem.

Visit our Tech Support Center

Tech Support CENTER

It's All In The Numbers

I f you've ever upgraded your cell phone, you know what a pain it can be to transfer your contacts' phone numbers from one phone book to the next. While some phone companies will transfer your phone book to your new cell for a small fee, doing it yourself provides more options and flexibility. With the right tools, you can

create regular backups, compose ringtones, and synchronize your phone book with Outlook or Outlook Express.

Although most basic cell phones don't come with the ability to synchronize with your computer, many cell phone manufacturers sell a data transfer cable with software. Other alternatives are also available, such as the DataPilot Universal Kit ($79.95; www.datapilot.com). This kit comes with software and nine connectors that let you connect the majority of phones from manufacturers such as Motorola, Samsung, LG, Nokia, Sanyo, and Sony Ericsson to your computer.

Kits such as the DataPilot Universal also provide additional functionality that's not necessarily available through other options. For example, DataPilot Universal lets you check your email on the go, using your cell phone as a wireless modem for your laptop. Also, creative enthusiasts can create ringtones and download pictures from their cell phones. However, these extraneous features are subject to compatibility with your phone and service provider.

The DataPilot software lets you back up your cell's address book, create ringtones, and more.

> Although the Merge tool claims to eliminate duplicate entries, this feature didn't work as well as we had hoped.

Because we can't cover all data transfer programs and options in the course of this article, we'll focus on transferring phone numbers between your PC and cell phone using the DataPilot Universal Kit. Other kits and programs should operate in a similar manner, but be sure to thoroughly read any users manuals.

Start Your Engines

Before you can back up your phone book to your PC, you'll need to install the DataPilot software. During installation in Windows XP (the kit also supports Win 98SE/Me/2000), you're likely to see Windows Logo testing warnings. Click Continue Anyway each time to proceed through the installation.

After installing the software, connect the appropriate phone adapter to the USB cable and then connect the USB cable to your PC (leaving the phone disconnected). Your PC should display the Found New Hardware Wizard. In this wizard Windows ought to recognize the new hardware as the Susteen Universal Cable II. Select Install The Software

Automatically (Recommended) and proceed through the installation, clicking Continue Anyway if you encounter any Hardware Installation warnings. If Windows doesn't correctly recognize the new hardware, select Install From A List Or Specific Location (Advanced) and guide the wizard to the DataPilot CD.

Once the Hardware Wizard finishes installing the Susteen Universal Cable II, connect your cell phone to the phone adapter. Depending on the Internet features of your phone, you may see a Found New Hardware Wizard window that identifies the Susteen USB Modem. Click through the Recommended installation.

Installation Complete

Now that you've completed the installation process, open the DataPilot software and click the Settings button. After selecting your country, you'll see a Communication Setting dialog box that asks you to select the COM Port, Country, Make, and Model of your phone. If you know the COM Port that the DataPilot software should use to communicate between your phone and PC, select it; otherwise, select Auto Config Or IrDA.

Even though you can select Auto Detect for the Make and Model fields,

Transfer data between your cell phone and PC with the DataPilot cables and software.

we don't recommend this approach as it may take your computer several minutes to figure out what type of cell phone you have. At minimum, you should specify the Make of your cell phone. After selecting Make and Model options, click OK. If you cannot find your particular model of cell phone, update the DataPilot software. Once you click OK, the computer will attempt to detect your phone. If successful, DataPilot will let you know

which COM port your phone is using. Click OK to close the message and then click OK to exit the Communication Setting dialog box. Your computer will then establish a connection with your phone.

We're Almost There
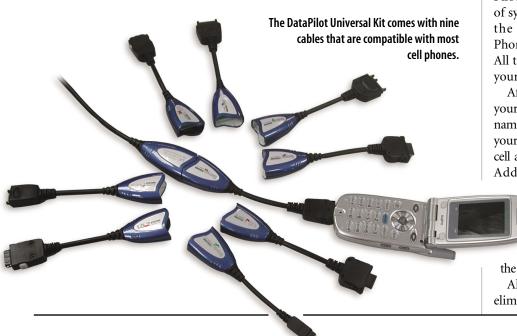
After starting the DataPilot Launcher, click the Phone Book Manager icon in the upper-left corner of the DataPilot home screen to begin the process of syncing your phone list. Next, open the Communication menu in the Phone Book Manager and select Read All to download a list of contacts from your cell phone.

After reading the list of contacts from your cell phone, you can rearrange, rename, or delete them. If you want to sync your computer address book with your cell address book, select File and Import Address Book and choose Outlook, Outlook Express, or Palm Desktop as appropriate. To combine the phone book on your cell phone and the one on your computer, navigate to the Tool menu and select Merge.

Although the Merge tool claims to eliminate duplicate entries, this feature

The DataPilot Universal Kit comes with nine cables that are compatible with most cell phones.

During installation, click the Continue Anyway button in the Software Installation dialog box.

Susteen's DataPilot Universal Kit provides an easy way to back up your valuable phone list.

didn't work as well as we had hoped. Because DataPilot appends data to the contact name from your PC to distinguish whether the phone number is associated with Work, Home, or Mobile, duplicate numbers may appear as separate entries because of name differences. For example, J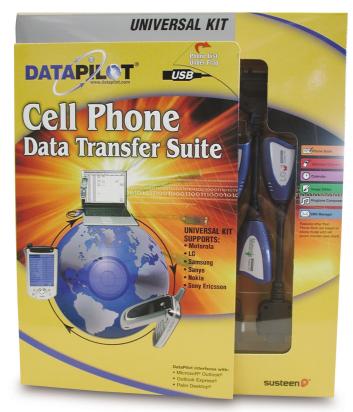oe Smith appears as "Joe Smith" in our imported cell phone book and as "Joe Smith /H" in our imported Outlook Express address book because his home phone number is stored in our address book. You can eliminate these duplicates using the Phone Number Check tab with the Find Duplicates option—be forewarned, though, that this task is a bit tedious.

Once you're finished editing and combining lists, send the phone numbers to your cell phone using the Write

DataPilot's Phonebook Manager software works with Outlook, Outlook Express, and Palm Desktop.

All command in the Communication menu. You will see a warning to let you know that you are about to overwrite all data on your cell. If you are confident in the changes you've made, click OK. You may also want to export your new address book to Outlook or Outlook Express so that everything is in sync. Click File and Export Address Book and then select the program format for exporting data.

Rest Easy

With your cell's address book backed up, you can relax, knowing you won't lose any important numbers if your cell phone goes missing or bites the dust. With a program such as the DataPilot Universal Kit, it's easy to back up your phone list or transfer it to a new phone. Now you can spend your time on other things, such as shopping for a new phone. ▮

BY JENNIFER JOHNSON

Microsoft Excel 2002

Finding Help

When an Excel task has you stumped and the nerdy guy in the next cubicle is on vacation, it's time to get proactive. Excel's Help files can be reached several ways and usually turn out to be pretty helpful.

Ask For Help

The most obvious approach is to click the Help menu. It lists multiple options, but you can click the first one, Microsoft Excel Help, to get started. Here you'll meet everybody's software pal, the Office Assistant. This little cartoon (which typically looks like a cheerful paper clip) floats around the screen until you summon it, which often happens unwittingly.

When you choose the Help menu's first item, the Assistant produces what looks like a cartoon strip's dialogue bubble. It's actually a dialog box where you can ask the Assistant questions. In the white box at the bottom of the dialog box, type a few words about what you're looking for. If you're trying to learn about charts, for example, type **chart** in the box and press ENTER.

The Assistant produces a list of Help topics it thinks are close to what you're looking for. Click one of them to summon a new Microsoft Excel Help window with an article on the relevant topic.

Another approach that produces the same result is to type your questions in the drop-down box in the upper-right corner of the window.

For quick help about items on-screen, choose Help and What's This. The cursor now has a question mark beside it—when you click something, such as toolbar button, a definition appears.

Using The Help Window

Once you're in the Help window, you can get serious about finding detailed info on a topic. The Assistant may have taken you directly to what you need with the article in the right pane. But if the article isn't what you're looking for, it's time to go searching. The left pane features three tabs you can use to dig deeper.

Find answers to your Excel questions by posing them to the cartoony Office Assistant or skipping the middleman and heading straight for the official Help window.

The Contents tab is organized like a table of contents, with Help topics arranged under big headings such as Getting Started and Charts. Click the plus sign beside a heading to see the topics under it.

The Answer Wizard tab lets you type a question, such as "How do I insert dates in cells?," and get information on the topic. The more keywords you put in your question (such as "insert," "date," and "cell" in our example), the more targeted your results. Click Search and several topics appear in the box below the one where you entered your question. Click the topic that looks most promising, and it appears in full in the pane to the right.

Another option in the left pane is the Index tab, a tool that's both more streamlined and more exhaustive. Here you enter a word, such as "date," and click Search, and Excel lists everything it finds with that keyword in it. The list can be a long one, including things like the COUPPCD function and adding dates. Narrow things down by typing a couple of keywords in the box, such as **date; insert**, or by clicking a keyword on the list in the window.

Navigating Help Articles

Many Help articles include text that looks like a Web link. Sometimes, clicking them opens a definition of a term, such as "shortcut menu." Other links open up more detailed information on a topic. You'll often see windows full of a dozen topics that all look like hyperlinks. This is information that's been collapsed for easier browsing; click a link to see all the steps you need on a particular topic.

Some Help topics, especially those explaining how a function works, include sample data. This information gives you a live example that makes it easier to understand how formulas work. You can study the info in the Help window or paste it into an actual worksheet, so you can better learn how the function operates.

Sometimes you'll click a Help topic and get a wordy message in the right pane that's headed with The Page Cannot Be Displayed. This means the Help topic is located on Microsoft's Web site, and Excel couldn't find a live Internet connection.

If you find a Help topic so useful that you'd like to have it in hard copy form, click the printer icon at the top of the window. **II**

BY TREVOR MEERS

Jasc Paint Shop Pro 8
Watermark Your Photos To Protect Them

Image Processing

Beginner

8 for
Win98SE/Me/NT
4.0/2000/XP

(NOTE: Corel acquired Jasc Software, so the most recent version, Paint Shop Pro 9, may list Corel as the developer.)

The Internet has made it easy to share files, and sometimes that isn't such a good thing. Consider how this ability affects professional photographers, for instance. When their photos are published, it's obvious who took the snapshot. But put that work on the Web, and others can download it and falsely claim that property as their own.

When you "sign" your work with a digital watermark, you're telling the world that this is your image. This permanent proof of authenticity is invisible to the viewer, but a computer can clearly detect it. Paint Shop Pro can help you create a watermark for your masterpieces.

The Creator ID

Before you begin, you need to take one preparatory step: Open the image in the software and make sure you have flattened it to just one layer. If you place a digital watermark onto a multilayered image and then make changes to a layer, the watermark may become degraded. Plus, you can embed a digital watermark into a layer only once, so it's best to have the image ready before you start.

Open the Image menu, choose Watermarking, and select Embed Watermark. The Embed Watermark dialog box prominently displays the Digimarc logo. Corel (which acquired Jasc Software) has teamed with Digimarc, a pioneer in this area, to offer this technology to Paint Shop Pro users. If you wish to use the basic Jasc Watermark Demo as the creator ID, that's fine; this will indicate that a Paint Shop Pro user created it, and for many users, this level of authenticity is sufficient. But if you'd like to create your own ID, click the Personalize button. The Personalize Creator ID dialog box can link you to the Digimarc site to obtain an ID. Click Register and the Digimarc site provides info on how to obtain an ID number, a PIN number, and a password. (If you aren't online, you can call the toll-free number listed in the dialog box and obtain the

Use a digital watermark to protect your photos from copyright violations.

necessary information.) Registering for an ID through Digimarc, however, requires a subscription to MyPictureMarc. Details about and pricing of its annual subscription packages are available at www.digimarc.com/mypicturemarc/buy-now.asp.

Once you have a Creator ID, enter it into the Personalize Creator ID fields and click OK. You're now back at the Embed Watermark dialog box, where we'll guide you through the next set of steps.

Watermark Features

Regardless of whether you chose to obtain a Creator ID, you'll want to customize the rest of the watermark features. Under Copyright Information, you have the option of entering two different years. The current year is already filled in for you, but if you'd like to enter an earlier year, you can go as far back as 1922, the earliest year that Digimarc allows.

The category (on the dialog box) titled Image Attributes is a set of options you can select to inform others about the way in which you intend your work to be used. Restricted Use means that the image is under your control and someone else cannot copy or otherwise use it without your permission. Do Not Copy indicates you own the image and others don't have permission to copy it. The last option, Adult Content, is used by adult-content providers in what Digimarc calls a "self-policing function." If any of these options apply to your work, select the appropriate checkbox.

Now set the watermark strength. As we said, digital watermarks are invisible to the human eye but a computer can detect them. If you want the watermark to display on-screen, select Monitor from the Target Output drop-down menu and then leave the Watermark Durability number at the default value of 8. If you want the watermark to appear on a printed image, select Print from the drop-down menu and leave the Watermark Durability number at the default value of 12. Or, use the slider bar and experiment with various strengths.

Finally, click the Verify checkbox and click OK. Nice job; you've digitally protected your image. The watermark is virtually invisible, but you can view it anytime by opening the Image menu, choosing Watermarking, and selecting Read Watermark. ▌▌

BY Heidi V. Anderson

Online

Access Your Files From Anywhere With FolderShare

FolderShare is a remarkable free service that automatically syncs folders on multiple computers via the Internet. As long as your system is running the FolderShare software, you can view and download files from anywhere.

Multiple computers means you have multiple places where you can forget to load the files you need. If you've found yourself at home when the file you need is at work or on the road with a laptop missing the latest version of an important document, FolderShare might be for you.

FolderShare features several cool functions. First and foremost, it serves as a tool to sync folders on multiple computers, so you can keep identical folders of documents on your home PC, laptop, and work-related computer. Then, when you make changes to a file on one computer, Folder-Share will feed updates via the Internet to the other synced machines.

Microsoft recently purchased FolderShare and offers it at no charge. To the relief of many cross-platform users, FolderShare still supports Macs, despite its new owners. And at the low, low price of $0, FolderShare is well worth a look.

Get In Sync

Try out FolderShare at www.foldershare.com. You'll need to create an account and install a small FolderShare Satellite program on each computer you want to include in your setup. After setting up one computer, go to the second (and third, and fourth, etc.) computer, log in to your FolderShare account, and click the Download link. Here, you can pick the Mac or Windows version of the software. Also, remember to log on with the same ID and password on all of your machines.

With Satellite running on all of the relevant computers, sit down at any of them and log on to FolderShare again. Click Sync My Folders and then Select Folders to Sync. The next page includes icons for each of your computers; pick the one with the files you want to duplicate. Click Specify A Folder and browse through the lists to find the right folder. (You also can create a new folder.)

FolderShare saves your choice and presents the computer icons again; now pick another computer you want to carry a copy of the synced folder. Next, browse to the drive and folder where you want to save the data. You can choose existing folders that already contain files, and FolderShare will create the necessary copies so that each machine eventually carries all of the files in the specified folders.

When you finish adding computers, FolderShare will ask for a Library Name for the new set of synced folders. You can choose anything, but it might be less confusing if you use the same name for the library and the synced folder on each machine. Choose Automatic Sync as your sync type in order to keep all of the files updated automatically.

After that, FolderShare takes care of the rest. If the folders you selected include a lot of files, it may take quite awhile for everything to transfer via the Internet, but the process should start working right away. Data is encrypted during its journey online, and only those who know your user ID and password (or those to whom you've granted access) can log in to browse through your files. FolderShare transfers any file up to 2GB in size.

Side Benefits

Along with syncing folders for yourself, you can set FolderShare to share libraries with other FolderShare users. You also can download individual files on an as-needed basis from any of your machines through any Web browser, even when using a computer that isn't running the Folder-Share software. The sync function has limitations, though. FolderShare only syncs entire files, not data within files. That means that you can't merge records within a database or merge emails inside an Outlook file, for example. And problems will arise if a file is opened and edited at the same time on two different synced machines. You may not be able to use FolderShare on work or school computers that are positioned behind firewalls (or if you don't have the requisite permissions to install the FolderShare software on those computers).

Within those boundaries, FolderShare does a terrific job. The process of syncing folders among computers also provides the advantage of having an automatic backup system in place. After all, it only takes one hard drive crash to ruin your day (or week). ▐▐

BY ALAN PHELPS

Microsoft Word 2002
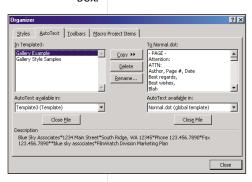
Use Templates To Streamline Work, Part II

Last month we looked at the basics of templates and how to find them within Microsoft Word 2002 and on the Web. We will talk about how to create a new template, transfer elements between templates, and add to the global template in this column.

Word gives you the ability to create new templates from an existing one, from a document, or from scratch. Each approach has its own uses.

Sometimes Word may have a template that isn't exactly what you need. Open an existing template by clicking File, New, and General Templates. Choose one and click the Template button in the lower right of the box. Click OK. The template opens, ready for you to edit. Click File and Save, name the file, and save it when you are done making changes.

After a while you may find yourself creating documents with the same layout and styles. For example, you may create faxes with the same basic layout that are destined for various recipients. In this case, it's often more efficient to create a template out of an existing document.

Open the document from which you are going to create the template. Eliminate any specific information, such as the name of the person the fax is going to. Click Save As and choose Document Template (*.dot) in the Save As Type drop-down menu. Enter a name for the template. By default, Word will save the new template in a folder of user templates. The template will be available under the General tab of the Templates dialog box.

Lastly, you can create a new template in the same way you create a document. Just choose Document Template (*.dot) in the Save As Type drop-down box when you are finished adding the elements you want.

Users aren't restricted to the Templates dialog box tabs Word creates by default. You can save templates in a folder of your own making,

You can add elements to the global template Normal.dot from other templates by using the Templates And Add-Ins dialog box.

The Organizer lets you directly transfer elements, such as Styles, AutoText, Toolbars, and Macro Project Items, from one template to another.

regardless of how you created it. Create a new template and then click File and Save As. Click the Create New Folder button, enter a name for the template, and then click OK. Open the Templates dialog box, and there will be a new tab for the folder you just created and your saved template.

It's easy to transfer elements between templates directly using the Organizer. Click Tools, Templates And Add-Ins, and Organizer. The Organizer dialog box contains a section for the active document or template and the global template, which is Normal.dot unless you changed it. At the bottom of the box is a description of the selected item, which can be a style, piece of auto text, toolbar, or macro, depending upon what tab you chose.

Click Close File under one or both of the templates or documents that appear in the dialog box and then click Open File to use the template or document you want. Copy elements from the left document or template to the right by clicking the Copy button. Click Rename or Delete to perform those functions.

Add To A Global Template

Global templates contain elements that are available to all open documents. The default global template is Normal.dot, but you can add other templates to it, and as such, you can apply template elements to a document without having to add them to Normal.dot.

Add to a global template by clicking Tools and Templates And Add-Ins. Click Add to open the folder that contains your templates. This folder will vary depending on which version of Windows you are using.

Select the template you want to use and then click OK. The Templates And Add-Ins dialog box appears with the added global template in the list. Select the box next to it to activate it. The template will be deselected the next time you start Word, so you will need to open the Templates And Add-Ins dialog box and select it again.

That's our whirlwind tour of templates in Microsoft Word 2002. We will present more focused information on templates in future issues, but for now, you know how to get started. ▮

<div align="right">BY TOM HANCOCK</div>

WordPerfect 11
WordPerfect & The Quick Fix

WordPerfect's writing tricks include a few quick fixes. We turn to QuickCorrect and SpeedLink, two tools designed to do at least some of your work for you.

QuickCorrect instantly corrects common typing mistakes, such as misspellings and extra spaces. SpeedLink, similar in some ways to QuickWords, can automatically expand keystroke shortcuts into full hypertext links.

Expand The List

QuickCorrect includes a list of common errors, as well as the means to build up the list to accommodate your own quirky mistakes. It doesn't take long to peruse the list to see if your own frequent typos already appear there. If they don't, you can add them to the QuickCorrect list easily.

To open QuickCorrect, go to the Tools menu and click QuickCorrect. The QuickCorrect dialog box appears with its eponymous tab on top. To add a recurring personal typo to the list, enter the error in the Replace box and then enter the correct spelling in the With box. Click Add Entry. QuickCorrect is not limited to single-word typos. You can also use it with a pair of words.

QuickCorrect lists common punctuation errors and misspellings.

Other Quirks

QuickCorrect is not just for mistakes. You can use it to automatically expand abbreviations. If you want to replace OFC with Official Fan Club, enter the former in the Replace box and the latter in the With box.

If you have wacky shorthand you use with colleagues, special words, or inside jokes with friends that involve deliberate misspellings, you can adjust QuickCorrect to ignore them. Look for the misspelling on the QuickCorrect list and delete it if you don't want the typo automatically corrected. To delete an entry, select it on the QuickCorrect list and click Delete Entry.

WordPerfect enables QuickCorrect by default, but you can turn the whole thing off. At the bottom of the QuickCorrect dialog box, there are two checkboxes. The first, Replace Words As You Type, controls the feature. Simply remove the check mark to disable it. Select the second box, Correct Other Mistyped Words When Possible, if you want to allow WordPerfect to automatically correct typos that have only one possible correction.

Link Up Quickly

Another tab on the QuickCorrect dialog box is SpeedLink. WordPerfect creates hyperlinks in your documents whenever you enter text that begins with "http," "www," "ftp," or "mailto."

SpeedLink also offers a way to hide the actual URL behind a clickable link. To do so, designate the visible link text through the QuickCorrect dialog box. On the SpeedLink tab, enter the text in the Link Word box. WordPerfect automatically adds @ in front of the shorthand you typed. In the Location To Link To box type the URL for the Link Word's destination. For example, type **Smart** in the Link Word box and **http://www.smartcomputing.com** in the Location To Link To box. Click Add Entry. Now when @Smart is entered in a document, WordPerfect changes it to Smart as a clickable link, underlined and colored blue.

WordPerfect doesn't recognize Link Words as case sensitive, so if you type **@smart computing**, the link text will be lowercase even though the shorthand designation is Smart. So if you want the link to appear as a proper noun, don't forget to enter the first letter capitalized.

Update Links

The Internet is a fluid place where hyperlinks often change. Should this happen to a SpeedLinks entry, it's simple to fix. Click the entry you wish to edit from the Location To Link To list. Select the text in the Location To Link To box and enter the new destination. Click Replace Entry. However, editing the SpeedLink entry won't change any links already embedded in your document.

As with QuickCorrect, WordPerfect's enables SpeedLink by default. If you're typing text that begins with "www," and it doesn't turn blue when you press ENTER, check to see that the box marked Format Words As Hyperlinks When You Type Them is checked. ▮▮

BY ANNE STEYER PHELPS

Microsoft PowerPoint 2002
Color Schemes

A s any regular PowerPoint user knows, the program rarely makes you search very long for some kind of prefab component to drop into your presentations. Whether you need fancy fonts, star-shaped objects, organizational charts, or dozens of other items, Microsoft built plenty of them at the ol' PowerPoint factory.

Color schemes are no exception. Whenever you create slides using a design template, PowerPoint assigns a palette of colors designed to work well together. All the elements, such as slide titles, hyperlinks, shadows, and bullets, get the preassigned colors as soon as you add them to a slide.

It's worth taking PowerPoint's suggestion on most of these color setups. Poor color selection can make slides either unappealing or downright unreadable for your audience. The combos available in the color schemes should help you avoid really awful choices such as placing red type on a green background. Of course, if you do decide to make your own color selections, we'll cover below how to do so.

To see the hues a color scheme specifies for various parts of a slide, you could insert a few elements into a test slide to see how PowerPoint colors them. But the simpler approach is to view the entire scheme all at once by choosing Format and Slide Design. Click Color Schemes in the upper-right corner of the window to open the Color Schemes task pane.

The thumbnails to the right represent all the color schemes available within the design template used to create your presentation. For a better view of each thumbnail, rest the pointer over one of the thumbnails, click the Down arrow to the right, and choose Show Large Previews. Now you can clearly see how slide titles or chart fill colors will look under each potential scheme.

PowerPoint's color schemes make it easy to design attractive slides, and you can customize the look if you're feeling creative.

Trying New Schemes

Apply a different color scheme to the active presentation by clicking one of the scheme thumbnails in the task pane. Clicking a thumbnail applies the new scheme to every slide in your presentation. If you decide you liked the previous look better, press CTRL-Z or choose the Edit menu's Undo Color Scheme option.

You can apply new schemes more selectively by clicking the Down arrow that appears next to each scheme's thumbnail when you rest the cursor over the thumbnail. If you'd rather apply the new scheme to only certain slides, click the arrow and choose Apply To Selected Slides.

Customizing Schemes

Eventually you'll feel that daring need to make your own color schemes. To do so, click the Design button on the Formatting toolbar and choose Color Schemes. (Skip this step if you already have the Color Schemes task pane open.) Click Edit Color Schemes.

On the Custom tab of the dialog box, click the color box of the item you want to change, such as Title Text, and then click Change Color. This opens a new dialog box where you have enough color options to make you feel like a kid digging into that first box of 64 crayons. The Standard tab lets you choose from dozens of existing colors, and the Custom tab lets you mix up a color of your choosing. When you find one you like, click OK.

Once you finish changing colors, click Apply, and the new colors go into a freshly created color scheme that's added to those available for the design template you're using. Each presentation can have up to 16 color schemes.

While you're developing your new color scheme, you can see how your selections look on slides without actually finishing the new color scheme. Click the Preview button in the Edit Color Scheme dialog box to see your look-in-progress applied to the active presentation.

Sharing Schemes

You may get so good at creating color schemes that you create your own custom look. One way to do this is to copy the color formatting between slides. Click a slide with the scheme you want to copy and then double-click the Format Painter button on the Standard toolbar. Go to the destination presentation and click each slide to which you want to apply the new scheme. ❚❚

BY TREVOR MEERS

Browsers

Manage Extensions In Firefox

The open-source Firefox browser is a flexible piece of software that invites other developers and code-wise users to add new functionality to its most recent build. So, if Firefox doesn't perform a task the way you prefer, there might just be an add-in among the growing multitude of third-party extensions. Coming from a variety of sources, extensions run the gamut from useful to silly: The Abe Vigoda Status extension, for instance, obviously doesn't increase your productivity level, but there are many other extensions that earn their keep by adding new tools, customizing the Firefox interface, or putting important information where you want it.

With almost 1,000 extensions available and more popping up each day, it's a sure bet that at least one of them will bring Firefox just a bit closer to your vision of the ideal browser.

Firefox's Extensions dialog box displays which add-ons you've installed, as well as their current status.

Check Your Setup

To check which extensions are already installed in your copy of Firefox, open the Tools menu and click Extensions. The Extensions dialog box displays each extension with a brief description of its purpose. Click an entry and then click Options to configure a particular extension. Some extensions have little or no configurable options, whereas others are highly customizable with settings on multiple tabs. To learn more about an extension or what its options do, right-click it in the Extensions dialog box and choose Visit Home Page, which will take you to a site devoted to that particular extension (although whether this shortcut actually works is up to the extension's developer). Sometimes, you may need to play around with the settings yourself to figure out how things work.

To temporarily turn off an extension, right-click it and choose Disable. If you want to completely remove it, select it and click Uninstall. (To complete the uninstall process, you'll probably need to close all Firefox windows and restart the program.)

Installing a new extension is just as easy as getting rid of it. The main trick is tracking down which extension (or extensions) you'd like to use.

Those just starting out with extensions should make their way online to the Firefox Add-ons gallery (addons.mozilla.org/extensions). If typing that Web address is too much work, you can simply click the small Get More Extensions link at the bottom of the Extensions dialog box.

Better Browsing

The Firefox Add-ons page lets you search for extensions by keyword or just browse around. For a good overview of the types of extensions many users find useful, click the Popular link. You also can browse individual categories using the links along the side of the page.

The typical extension description lacks much detail, but you can always test drive an extension to measure its usefulness. Each entry in the catalog includes a link to download and install that particular extension automatically, assuming you've enabled JavaScript in Firefox. During the download, the Extensions dialog box opens to show you the status, but many of the transfers are small enough that the progress bar moves pretty fast. In most cases, you'll need to restart Firefox before the extension will begin to work.

You may find yourself revisiting the Firefox Add-ons gallery from time to time to see what's fresh. New extensions are added all the time, and old extensions might be updated with additional features. There's no actual limit to the number of extensions you can install, so it can be easy to get carried away.

Downloading a newer version of Firefox sometimes disables older extensions that weren't written with the upgraded environment in mind. To check for shiny new versions of your extensions, open the Extensions dialog box and click Find Updates. Firefox automatically checks all of your installed extensions (even if you disabled them) for more recent replacements. You may see dedicated Update Now buttons next to some disabled extensions.

Because authors of extensions generally aren't in it for the money, some extensions might languish disabled for a while whenever Firefox undergoes a significant upgrade. That's a risk you take when you install and grow to love an extension, but even a brief relationship with a more perfect browser is probably worth it. ▐▌

BY ALAN PHELPS

Quick Tips

Secrets For Succeeding In Common Tasks

BY STEPHEN J. BIGELOW

Microsoft Word

Question: I do a lot of editing using Microsoft Word, and I'm always straightening out formats. Is there an easy way to see my document formatting or find text that has the same format?

Answer: Microsoft Word 2003 offers visibility into your text formatting. If you want to see how certain text is formatted, select the text you're interested in and then click Format and Reveal Formatting. A window will open along the right side of your page that lists the specifics of your selected text. If you want to see all of the text in your document that has the same formatting, just move your pointer into the Selected Text box, click the Down arrow that appears, and select the Select All Text With Similar Formatting entry. Word will highlight all the text in your document with those format attributes.

If you want to start the document's formatting from scratch, select the entire document, click Format and Reveal Formatting, move your arrow into the Selected Text box, click the Down arrow that appears, and select the Clear Formatting entry. This will return the document to its default format, and you can reapply new formats as necessary.

Microsoft PowerPoint

Question: I want to display a Microsoft PowerPoint presentation on my laptop, but it doesn't have all the fonts and other elements that my desktop PC has (so the slides don't display correctly). How can I show the presentation on the new PC without having to install the same fonts and such?

Answer: The best way to do this is to package your presentation. This adds a viewer utility, so you can play PPT presentations on PCs that don't have PowerPoint installed. It also allows you to embed text fonts directly into PPT files. Of course, this makes the presentation file larger (potentially much larger, if you're including a large number of fonts), but it should guarantee that your presentation will look the same regardless of which system it is running on.

With PowerPoint 2003 open, click File and Package To CD. Click the Options button, select the Embedded TrueType Fonts box, and click OK. Now click the Copy To Folder button, browse to the location where your packaged presentation should be stored, and click Select. This places the packaged file on your original PC, but you can always burn the packaged file to CD or DVD later before taking the disc to another PC.

Fans

Question: I hear the fan in my new PC getting louder and softer during the day. Is this normal, or is there a problem?

Answer: Most of today's PCs use variable-speed cooling fans. When the PC is idle, the main cooling fans slow down (perhaps even stop) to reduce noise and save electricity. When the PC is working hard, the fans speed up to carry away more heat. This is normal. On the other hand, if your fan(s) sound as though they're vibrating or grinding, have a technician address the problem while the unit is still under warranty.
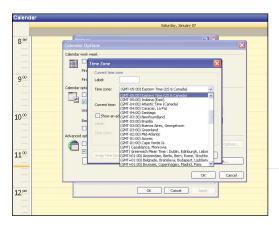

Word allows you to identify the formatting of any text, locate text with identical formatting, or clear the formatting to a default value.

Use PowerPoint's Package For CD feature to create a self-running presentation and embed TrueType fonts to ensure the presentation works on any PC.

Microsoft Outlook

Question: I do a lot of traveling and often wind up in a different time zone several times a week. But my Microsoft Outlook Calendar doesn't keep up with the time changes, and I'm always struggling to adjust the time changes for my Calendar.
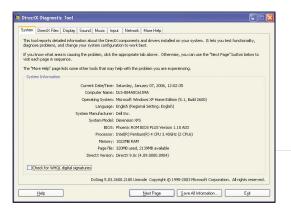
Answer: Outlook 2003 lets you change your time zone. Click Tools and Options and then click the Calendar Options button on the Preferences tab. Now click the Time Zone button and select your current time zone from the drop-down menu. Click OK to save your changes. This way you can always keep Outlook running with your current time zone, and reminders will arrive on time. When you move to another time zone, just update the setting in Outlook.

Outlook 2003 lets you change time zones to keep Outlook synchronized while you're traveling.

DirectX

Question: I'm using a program that needs DirectX 9.0c. How can I tell if this is on my system already? If not, how do I install it?

Answer: An easy way to check your version of DirectX is to simply use the DxDiag utility. In Windows XP just click Start and Run and type **dxdiag** in the Open field. Click OK. After a few moments, the DirectX Diagnostic Tool window will open and list details about your PC. The last entry on the System tab will show your DirectX version. Note your version number and click Exit to close the diagnostic.

If you need to update DirectX, there are generally two options. One, the program you're about to install may include the latest version of DirectX and can install it as part of the overall program's installation process. Check the installation instructions that accompanied your program for more details. Otherwise, you can download and install the latest version of DirectX from Microsoft's Web site at www.microsoft.com/directx.

Once you upgrade DirectX, you may also want to check for any graphics driver updates from your video card manufacturer.

Use the DirectX Diagnostic Tool to check your DirectX version (and other system details).

RAM

Question: I added another gigabyte of RAM to my PC so that I could run applications without relying on the hard drive for virtual memory, but the program still hesitates as the hard drive churns away. How can I stop this and make the program run from memory only?

Answer: You might need to disable the virtual memory on your PC. Close all of your applications. In WinXP click Start, Control Panel, Performance And Maintenance, and System and click the Advanced tab. Click the Settings button in the Performance area and then select the Advanced tab. Click the Change button under Virtual Memory. Select the drive handling your paging file (virtual memory) and click the No Paging File radio button. Click the Set button and select OK to save your changes. Reboot the computer. Try your application again and see if its performance smooths out.

Double The Fun

Dual-Layer DVDs Create More Space For Your Files

DVD players have quickly found their way into our hearts as a quality replacement for VCRs. The extra features we can view on DVDs enhance our viewing experience and add insight to movies, but it can be a little annoying if our favorite movie and its features don't fit on one disc. However, this is quickly becoming less of a problem due to the introduction of the double-layer DVD (also referred to as a dual-layer DVD), which packs two writeable surfaces on one side of a disc.

Drives such as the NEC ND-3550A (about $50 online; www.nec.com) can write to either DVD+R DL or DVD-R DL media.

Quick History

Many movies made before 2004 were put on discs known as DVD-5s. These have one recordable side that can hold 4.7GB of data, or roughly two hours of high-quality video. However, Hollywood is putting more and more movies on a new type of disc known as DVD-9. This disc has two recordable faces on one side, and with a capacity of 8.5GB, it nearly doubles the capacity of DVD-5s.
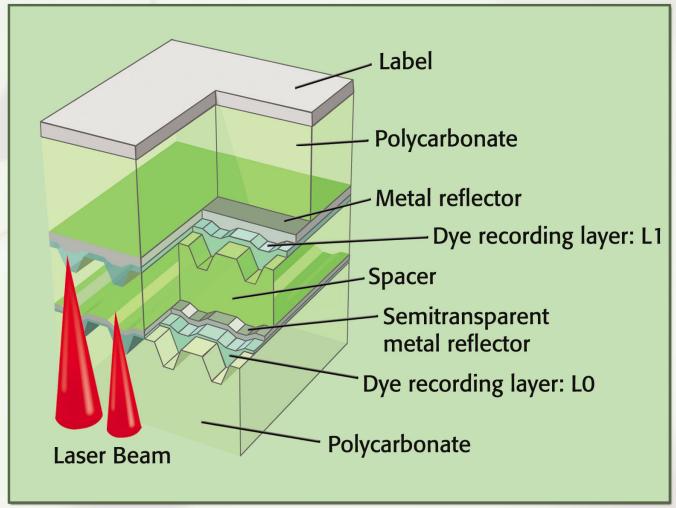
Double-layer DVD+Rs (DVD+recordables) have been around a while: The technology was announced in October 2003, and the first recordable discs were released for public use in early 2004. During the development of double-layer technology, engineers focused on making double-layer DVDs compatible with normal DVD players. As a result, any DVD player you have should read double-layer DVDs. In fact, you've probably already watched one and not even realized it.

Tale Of The Tape		
	DVD±R/RW	DVD±R DL
Capacity	4.7GB	8.5GB
Amount of DVD-quality video that will fit on disc	2 hours	4 hours

How It Works

Writing to double-layer discs is a fascinating process. Engineers had to figure out a way to write to two layers on the same side of a disc, while remaining compatible with today's DVD players. They achieved this through a multi-layered setup of reflectors and recording layers. This is the same technology used in your DVD+R DL burner. The actual writing is done on dye recording layers. The first layer, called L0, is written using a heated laser beam. After the first layer is written, the laser refocuses and shines through the semitransparent metal reflector and the transparent spacer layer, which is present for cooling purposes, to write to the second recording layer, L1. The polycarbonate layers protect the recording layers from fingerprints and scratches and lets manufacturers place a label on the disc without hurting the recording surface.

- Label
- Polycarbonate
- Metal reflector
- Dye recording layer: L1
- Spacer
- Semitransparent metal reflector
- Dye recording layer: L0
- Polycarbonate
- Laser Beam

This is a cross section of a typical DVD+R DL.

Compatibility Issues

Though double-layer discs can be played on practically all DVD players, things get a little more complicated when you're looking for the right media for your DVD burner. There are two main types of double-layer DVDs: DVD+R DL and DVD-R DL. There are certain DVD burners equipped to burn only DVD-R DLs and others that were made to burn only DVD+R DLs. However, this is becoming less of a problem because more and more DVD burner manufacturers are releasing products that can burn both forms of media. Before you buy a 10-pack of DVD+R DLs, make sure your DVD burner can write to double-layer discs and that it can write to DVD+R DLs. Also, check the optical drive's manufacturer's Web site. Some are starting to offer firmware updates that will enable your burner to record both media types.

What To Do When . . .
Windows Media Player Won't Show Visualizations

We don't usually think of troubleshooting a video problem when playing a music CD. But if you enjoy watching visualizations in Windows Media Player 10 (available only with Windows XP) while listening to a CD through the player, you may notice that WMP is not always able to display visualizations.

Switch Modes

Solving your display problem might be as simple as switching modes. You can display WMP in Full and Skin mode by selecting these options from the View menu. While the Skin mode means cooler display options for WMP itself, it might prevent you from enjoying visualizations, as some skins can't support them.

Similarly, not all visualizations will work when WMP is in Full-Screen mode, which isn't the same as Full mode. You can enlarge WMP to take up the entire screen when in Full mode by clicking the View Full Screen button in the upper-right corner of the Now Playing screen or by simply double-clicking anywhere on the video pane.

Of course, you won't be able to view anything in Full-Screen mode if the settings don't allow it: Click Tools, Options, Performance, and Advanced. Under Video Acceleration, make sure the box next to Enable Full-Screen Mode Switch is selected. Click OK twice and then Yes to apply the change.

Troubleshoot Your Video Card

Display problems also could be the result of faulty hardware or software. If you suspect this might be the case, the first thing to check is
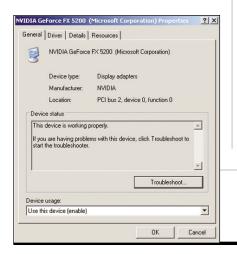
Using Skin mode is the cooler way to play CDs in Windows Media Player, but some visualizations will work only in Full mode.

your video card (sometimes referred to as a video adapter).

Click Start, Control Panel, and System. In the System Properties dialog box, choose the Hardware tab. Click Device Manager to see a list of all your system devices. Click Display Adapters and then double-click the name of the video card to open yet another dialog box.

On the General tab, look under Device Status for confirmation that the card is working properly. If the card is the source of the trouble, click the Troubleshoot button. This will walk you through a Q&A session with the Help And Support Center.

If that doesn't fix the problem, you may need to update the driver for your video card. An outdated video card driver may not work with the DirectX technology WMP10 uses, rendering visualizations and videos choppy at best.

(For instance, Microsoft Help And Support [support.microsoft .com] notes that NeoMagic and ATI video cards are not compatible with the DirectX technology in WinXP.) The General tab should list the company that published your card's driver. If necessary, go to that company's Web site and download a new driver. Re-open the dialog box for your video card by clicking it under Display Adapters, but this time, choose the Driver tab. Click the Update Driver button and follow the instructions to find and install the new driver you just downloaded.

Make It Work

If a new driver is not available for your video card, you can either buy a new card or attempt to work around the technology. Select Options from the Tool menu. On the Performance tab, click Advanced under Video Acceleration and then deselect the box next to Use Video Mixing Renderer in both the Video Acceleration and DVD Video sections. Click OK twice and then Yes to apply the changes.

Contact The Publisher

By default, WMP comes with dozens of visualization options, categorized in eight distinct collections. You also can download more from the Web. One option is to click View, Visualizations, and Download Visualizations, which takes you to a Windows Media page.

Or go to WMPlugins.com (www.wm plugins.com), another Microsoft site. Downloads at these locations are usually free, but Microsoft offers no guarantees on how third-party visualizations might perform with WMP. If you have trouble displaying visualizations you've downloaded from either of these two sites or another site, contact the publisher of the plug-in directly for advice.

In addition, before you download a visualization, read the requirements for the file to make sure your system is up to speed. ▮▮

BY RACHEL DEROWITSCH

WMP9 vs. WMP10

The introduction of WMP10 caused a few problems (including the one discussed in this article), but mostly it brought with it a host of new features. If you're still using WMP9, you might wish to upgrade so that you can take advantage of the following: cleaner toolbar and simpler user interface, enhanced Media Library, choice of online music stores, enhanced device support, auto-sync with supported devices, "smart jukebox" features, improved (and faster) searching, and MP3 support. Is it perfect? Nope. (Most importantly, WMP10 still lacks compatibility with Apple's iPod.) But it's a lot better than it was and worth switching to, especially if WMP9 has been giving you problems. ▮

Troubleshooting your video card, including updating your driver, may solve your visualization display problem.

Examining Errors

BY JEFF DODD

Problem: A reader encounters a particular error message almost every time he opens Internet Explorer. Sometimes he can close the message immediately; other times, it takes him several tries before the message goes away for good. The message doesn't seem to have an adverse effect on his surfing, though.

Error Message: "16 bit MS-DOS Subsystem. C:\WINDOWS\416434~1.EXE. The NTVDM CPU has encountered an illegal instruction. CS:053f IP:01af OP:63 6f 6e 74 65 Choose 'Close' to terminate the application. 2YYUR2YYUBICUR2YY4ME."

Solution: Talk about gobbledygook. Although we have never encountered this particular error message, we have seen others like it. And most of the time, these errors are caused by some kind of malicious code, such as the P04n dialer Trojan horse and the Netbus virus. We suspect that's also the case here.

Why? Because of the clever riddle that appears as the last line of the error message: 2YYUR2YYUBICUR2YY4ME (translated as "too wise you are, too wise you be, I see you are too wise for me"). Legitimate software developers may lace their pop-up messages with all sorts of jargon, file names, and memory addresses, but they wouldn't complicate a legitimate error message with such meaningless frivolities.

The resolution, then, is for the reader to invest in an up-to-date antivirus utility, such as McAfee VirusScan ($39.99 for one-year license; www.mcafee.com) or Symantec's Norton AntiVirus ($39.99; www.symantec.com), and give his system a thorough cleansing. He also should download and install antispyware, such as Webroot's Spy Sweeper ($29.95; www.webroot.com) or Computer Associates' eTrust PestPatrol Anti-Spyware ($29.95; www.pestpatrol.com), which will detect and eliminate other forms of unwanted code. One of these methods should take care of the error.

Problem: Ever since he installed Windows XP SP2 (Service Pack 2), a reader receives an error message each time he starts his computer, but he can close the message and continue computing without experiencing other problems.

Error Message: "HKCMD module has encountered a problem and needs to close."

Solution: Hkcmd.exe is the file name for the Hotkey Command Module, a utility associated with the graphics drivers for the Intel 810 and 815 chipsets. The executable file enables a user to create hotkeys for activating various graphics-related functions, but also is known to conflict with certain WinXP updates, including SP2. The reader can resolve the issue by undertaking two reparative tasks.

First, he should access the Windows Updates site (update.microsoft.com), review the list of available updates (not just the high-priority updates) for one labeled Intel Graphics Controller, and install the update on his PC. This will replace the existing driver with a new one that no longer conflicts with WinXP.

Second, he should install and run antispyware. Invasive programs have been known to exploit the Hkcmd.exe file for their own purposes. Antispyware will check the Hkcmd.exe file to determine whether it has been contaminated, and then it will remove the infection if necessary.
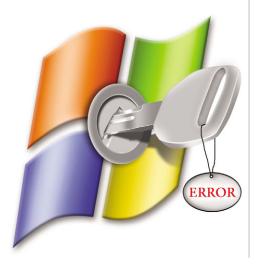
Hkcmd.exe

Hkcmd.exe

Problem: Each time a reader starts WinXP, he receives an error message. He can close the message and proceed into Windows without any other problems.

Error Message: "Could not find program code."

Solution: Determining the precise cause of a generic message such as this can be quite taxing, but we think we can help the reader resolve this particular issue with minimal effort.

We suspect that Windows is trying to load a corrupted program during the startup routine. All the reader has to do is pinpoint the program in question. He can do so with a little help from the System Configuration Utility. To access it, the reader should open the Start menu, select Run, type **msconfig** in the Open field of the resulting dialog box, and click OK. He then should choose the Startup tab in the System Configuration Utility, click the Disable All button to deselect all of the startup items listed here, click OK, and reboot the PC.

Odds are good the reader won't see the error message when Windows starts up (if he does, he should consider reinstalling WinXP), thereby verifying that a corrupted program is indeed the source of the error. But which one? To get an answer to that question, the reader should return to the Startup tab of the System Configuration Utility and select only the first startup item on the list. He then should click OK to accept the change and reboot the computer. If he doesn't receive the error message this time, he should go back to the System Configuration Utility's Startup tab, select another startup item, click OK, and reboot the computer again. He needs to repeat this process until he receives the error message, at which point he will know that the most recently selected startup item is the culprit.

Next, the reader can remedy the problem by removing the errant code—the location of which is listed under the corresponding Command and Location headings—associated with the startup item. Finally, after rebooting the computer and determining that the error is gone for good, the reader can safely reinstall the program that became corrupted and caused all the trouble in the first place.

Problem: Whenever a reader tries to install a program from a CD-ROM, he receives an error message. The message doesn't prevent him from completing the installation, and it doesn't appear when he inserts other types of CD-ROMs.

Error Message: "Cannot find Shell.dll."

Solution: The Shell.dll file is a key system component that, in basic terms, enables software to interact with Windows. As such, it is a favorite target of virus and spyware developers. For this reason, the reader should use his up-to-date antivirus and antispyware utilities to scan his system for malicious code before he does anything else.

Next, the reader should run the WinXP Recovery Console to repair any hard drive errors that might have damaged the file, thereby prompting the message. He can do so by inserting the Windows setup CD in the computer and rebooting the system. When the Welcome To Setup menu displays, he should press *R* and then press ENTER to access the Recovery Console.

Following the on-screen instructions, he can log into Windows and enter the administrator's password (if he has one). A command prompt will eventually appear on-screen; when it does, the reader should type **chkdsk /r** and press ENTER.

When the disk scan is complete, the reader should perform an in-place upgrade to reinstall the Shell.dll file and any other corrupted or damaged system files. To perform such a maneuver, the reader should boot to the Windows setup CD and access the Welcome To Setup menu. Rather than press *R*, however, he should press ENTER this time to set up WinXP. He can follow the on-screen instructions to accept the EULA (End-User License Agreement), after which setup will ask whether he wants to repair an existing installation of Windows. The reader needs to answer in the affirmative by highlighting the drive on which Windows is installed and pressing *R*.

Windows Setup will handle the situation from here. It will reinstall key system files, restart the PC (the reader should remove the installation disc before the computer reboots), and proceed with the rest of the reinstall. The next time Windows reboots, it should be as good as new.

Have questions about an error message you've seen? Send us your message (errormessages@smartcomputing.com), and we'll try to decipher it. Tell us what version of Windows you're using, give the full text of the error message, and provide as many details in your explanation as possible. Volume prohibits individual replies.

Fast Fixes

Security Update For Outlook 2000

Problem: Microsoft pinpointed a weakness in Outlook 2000 that could let damaging code run on your PC when you open an email sent by a hacker.

Resolution: Download and install this update, which could be up to 3.4MB depending on the update status of your computer. To download the update, type the URL we listed below in the Address field of your browser window. After Microsoft's Download Center page loads, type **KB892842** in the Search text box and click Go. Click the link named Security Update For Outlook 2000 (KB892842), and on the next page, read the instructions for the download procedure. If you have your product's CD-ROM, click the link that reads Office2000-kb892842-client-enu.exe. If you don't have your CD-ROM or have problems with the first file, try the second link (Office2000-kb892842-fullfile-enu.exe). After the transfer is complete, double-click the file to begin the installation process.

www.microsoft.com/downloads

Windows XP Security Patch

Problem: Microsoft has found a problem with Windows XP that could let a hacker attack and take control of your computer.

Resolution: Download and install this 584KB fix to protect your PC from possible intrusions. To download the update, type the URL we listed below in the Address field of your browser window. After Microsoft's Download Center page loads, type **KB908519** in the Search text box, and click Go. You'll see a list of updates, so scroll through these options and click the link named Security Update For Windows XP (KB908519). On the next page, click Download to save the file to your computer. After the file transfer is complete, double-click the downloaded file (WindowsXP-KB908519-x86-ENU.exe) and follow the on-screen steps to complete the installation.

www.microsoft.com/downloads

Streets & Trips 2006 Construction Update

Problem: The maps in your version of Microsoft Streets & Trips 2006 do not contain the most up-to-date information regarding new roads and construction.

Resolution: Download the newest map versions from Microsoft's Web site. To download the update, type the URL we listed below in the Address field of your browser window. After Microsoft's Download Center page loads, type **Streets and Trips 2006 Construction Update** in the Search text box, and click Go. Click the link named Streets And Trips 2006 Construction Update, and on the next page, click Download. After the file transfer is complete, move the downloaded file (ConstructionA5071522.dat) to the appropriate folder (C:\PROGRAM FILES\MICROSOFT STREETS & TRIPS\DATA) on your hard drive. Then, when you restart the program, you'll see the updated maps.

www.microsoft.com/downloads

Windows XP Service Pack 2 Error

Problem: After you install WinXP Service Pack 2, you see an error message including the phrase: Stop 0x7e In Aec.sys.

Resolution: Download and install this 565KB update to stop the error message from recurring. To download the update, type the URL we listed below in the Address field of your browser window. After Microsoft's Download Center page loads, type **KB900485** in the Search text box and click Go. Click the link named Update For Windows XP (KB900485), and in the Validation Required box, click Continue. After you validate your copy of Windows, click Download. Once the file transfer is complete, double-click the downloaded file (WindowsXP-KB900485-x86-ENU.exe) to begin the file installation process.
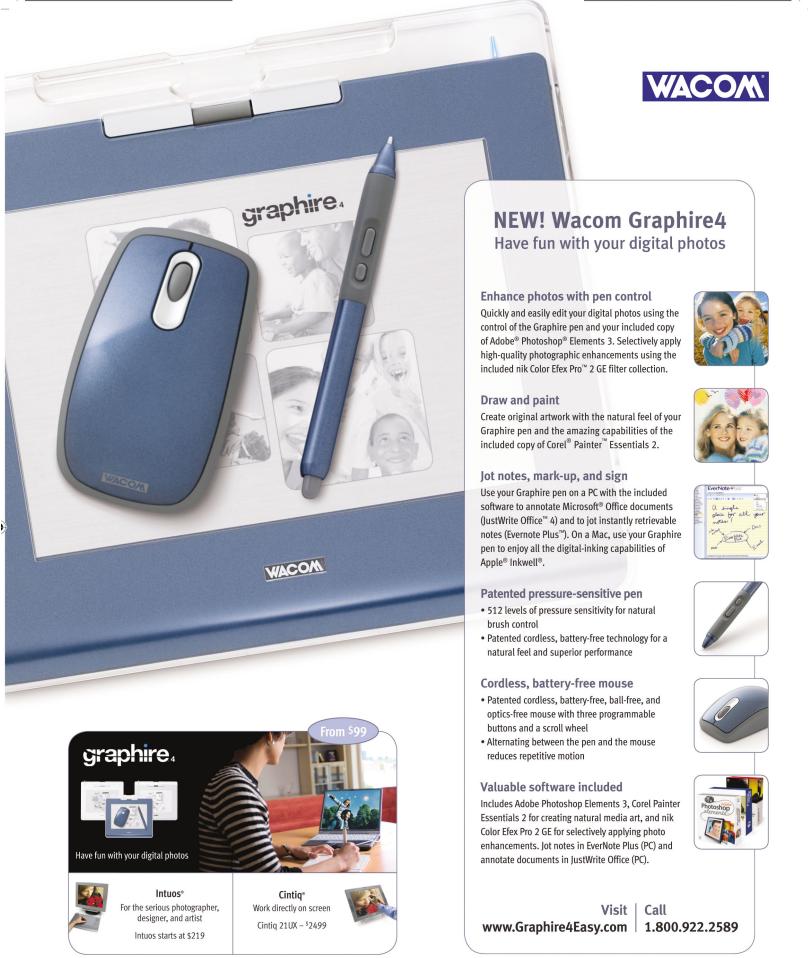
www.microsoft.com/downloads

Fix Of The Month

WinXP Graphics Rendering Engine Update

Problem: Microsoft found a vulnerability in the WinXP graphics rendering engine that could let a hacker take control of your PC.

Resolution: Download and install this 711KB update to shield your computer from such attacks. To download the update, type the URL we listed below in the Address field of your browser window. After Microsoft's Download Center page loads, type **KB912919** in the Search text box, and click Go. Click the link named Security Update For Windows XP (KB912919), and on the next page, click Download. After the file transfer is complete, double-click the downloaded file (WindowsXP-KB912919-x86-ENU.exe) to install the update.

www.microsoft.com/downloads

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Utilities

Q In Symantec's Norton Internet Security program, I've chosen the Prompt setting for instances when a Web site wants to leave a cookie on my system. Now, whenever a site wants to place a cookie on my hard drive, I'm prompted to pick one of two choices: Accept Cookie or Don't Accept A Cookie. I'm also presented with the choice to Always Use This Answer. I erroneously clicked the Don't Accept A Cookie option and the Always Use This Answer setting, and now a site I want to visit won't let me in. How can I undo my choices? I'm using Windows XP Home Edition, with plenty of memory and hard drive space.

A How you reverse your choice depends on which version of Norton Internet Security you have. We'll note these version differences as we proceed.

Open Norton Internet Security by clicking either the Desktop icon or the program name in the Start menu. Or, you could right-click the program's icon in the System Tray (the area on the far right end of the Taskbar) and choose the bold program name from the context menu.

Next, open a particular sequence of pages—and here's where the version you have makes a difference. For Norton Internet Security 2003 and 2004: Click Privacy Control, Configure, and Advanced. For version 2002: Click Options, Internet Security, and Advanced Options. And for version 2001: Click Options and Advanced Options. Regardless of which version you have, you should now see a Norton Internet Security Options or Properties dialog box on-screen with a Web or Web Content tab.

On the tab, scroll through the Web address list on the left and click the name of the Web site you're having trouble with due to your settings regarding cookies. Click User Settings and deselect Use Privacy Settings in the Cookies section. Then, select Permit, click OK, and close Norton Internet Security.

Now open your Web browser and try to access the site. If you see a Norton Internet Security or Norton Personal Firewall (which is part of the Internet Security suite) alert for a cookie, select the Permit option and select Always Use This Action. Click OK. Repeat this step for each cookie alert that you see while browsing this site.

Windows

Q My husband purchased a new computer for me to replace my old one. Both computers have Windows XP Home Edition. What is the easiest way to migrate the stuff on my old computer to my new one? We have a small home network, and the new computer is working fine on the network.

A There are several ways to migrate your files and the settings of your old computer to your new computer. Because your computer is on a home network, our advice will center around using the network to help in the migration process.

Fortunately, Microsoft has included a migration wizard in WinXP to move files and settings

to your new computer. It's not perfect and doesn't move everything, but it's a good tool to start with. All you'll need is a blank 3.5-inch floppy diskette.

First, we'll launch the wizard on your new computer. Click Start, All Programs, Accessories, System Tools, and Files And Settings Transfer Wizard. When the wizard launches, click Next. Make sure that New Computer is selected and click Next. Now you'll see a window that asks if you have a WinXP installation CD-ROM. Select the I Want To Create A Wizard Disk In The Following Drive option and click Next. Insert the floppy into your new computer's diskette drive. The wizard will create the floppy, and when it's finished, it'll

tell you to go to your old computer; as you do, be sure to leave the wizard running on your new computer.

Now insert the Wizard Disk you just created into your old computer. Launch the wizard as we previously described, and when the Welcome To The Files And Settings Transfer Wizard dialog box appears, click Next. Under the Select A Transfer Method heading, select Home Or Small Office Network and click Next. When the wizard asks what you want to transfer, select Both Files And Settings and then click Next.

The wizard will scan your old computer and collect all the files and settings on it. This should only take a few minutes. When it is complete, the wizard will ask you for the password on your new computer. Enter the password and click OK. Now the wizard will transfer your files and settings over to your new computer. If you have a large number of files, this can take a bit of time. When the wizard has completed the transfer, it will display a completion-type dialog box. Click Finish and move to your new computer.

Once the wizard has completed transferring your files and applying your settings, it too will display a completion-type dialog box. Click Finish and then restart your computer for the changes to take effect.

Although the Files And Settings Transfer Wizard does its best to make your new computer a mirror of your old one, it isn't infallible. It generally migrates data from Microsoft applications properly, but if you use a variety of non-Microsoft applications, you'll need to manually migrate that data. Also, if you keep your files in odd locations instead of My Documents and My Pictures, you'll need to specify that during the migration process.

Software

Q I've been using Firefox for several months now, and one question has always stuck in my mind: How can Firefox be free?

A Firefox is one of thousands of applications that are known as open-source software. Open-source software is usually available at no cost, and the code that comprises the software is "open" so that programmers can modify and improve the software at will. Sometimes developers refer to this software as FOSS (free open-source software), the most famous of which is Linux.

The history of open-source software goes back to the origins of computer programming. When computers were tremendously expensive systems that occupied entire buildings, the users were typically computer scientists who freely exchanged their software with colleagues.

As the Internet began to take shape, open-source software was—and remains—a vital ingredient. For example, open-source software is used for Web servers known as DNS (domain name system) servers that translate Web addresses (such as www.smartcomputing.com) into IP (Internet Protocol) addresses. Open-source software also is used for mail servers that handle millions of email messages each day.

Over the years, as personal computers became more affordable, savvy businessmen realized that packaged software could be a lucrative market. Applications such as Microsoft's Office, Adobe's Photoshop, Inuit's Quicken, and others quickly became sources for software developers to make incredible amounts of money. Yet, despite this development, the open-source ethos persisted.

With the introduction of Linux in the 1990s, open-source software quickly captured the attention of the general public. Linux is a robust, powerful OS (operating system) created primarily by Linus Torvalds. The idea that a single person could create something to rival Microsoft's Windows OS shocked the computing world, and the idea that Linux would be a free product was hard to grasp for those who grew up in the world of shrink-wrapped software.

Linux encouraged an entire generation of software programmers to create applications in a collaborative way. A programmer could come up with an idea for an application, write the program, and then ask colleagues to evaluate the software. New ideas were incorporated from anyone who had the skill to program, and as an application grew in popularity, more developers would assist in writing and maintaining the program. Web sites such as SourceForge.net (www.sourceforge.net) provided a convenient location for programmers to distribute their applications.

The main impetus for Firefox was dissatisfaction with the dominant Web browser, Internet Explorer. Firefox began as part of the Mozilla Project that Netscape started, and eventually AOL joined the group. AOL and

Netscape initially paid developers to work on the Mozilla project, but a significant number of software developers worked on Mozilla for their own personal satisfaction. Eventually, the Mozilla Project became an independent organization and gave the most recent version of its browser the name of Firefox.

Why do software developers work on projects such as Firefox and let users install the software on their computers for free? Some are employees of large corporations that want to insure that important FOSS projects have adequate support. Others are programmers that are just interested in a particular project and work on it in their spare time. Some projects even receive grants and donations that they use to hire full-time programmers. Whatever the reason, the end result benefits consumers.

Hardware

Q I purchased a new computer that has a SATA (Serial Advanced Technology Attachment) hard drive. But my old computer has two IDE (Integrated Drive Electronics) hard drives that I want to use with the new computer. Is there any way to add these two IDE drives?

A As you've discovered, many new computers are shipping with SATA drives instead of the older IDE drives. SATA has several advantages over IDE, the most important of which are the higher potential transfer rate and easier-to-manage cables.

Most IDE drives use an 80-pin ribbon cable for transferring data and a 4-pin Molex connector for providing power to the drive. In contrast, SATA drives use a smaller 7-pin data cable, as well as a 15-pin power cable. Doing so helps reduce the amount of cable clutter inside your computer case, and it improves the airflow throughout your computer's chassis.

If your new computer has legacy IDE connectors, you shouldn't have any problem reusing your old hard drives. If you're unfamiliar with IDE connectors, look inside your old computer's case. The IDE connectors on the motherboard are usually white, and you can follow the 80-pin ribbon cable from the drives to the motherboard. So, if your new computer has similar connectors, you're in business.

You also can check with the new computer's manufacturer to find out if there are legacy IDE connectors on your new computer. Reputable manufacturers will usually provide guides for installing extra drives in your new computer.

But if your new computer is only equipped with SATA connectors, you have two options left: one, purchase a SATA-to-IDE cable; or two, put your old drives in an external hard drive enclosure that can connect to your new computer via USB or FireWire. An enclosure will cost more than the cable option we mentioned, but the enclosure may be your only option if you don't have enough space inside your new computer case for two additional hard drives.

You should be able to find a SATA-to-IDE cable either online or at your local computer store for under $20. USB and FireWire enclosures are approximately $50 each (for single drive enclosures).

With a hard drive enclosure, you simply install your IDE drive into the enclosure and connect the enclosure to your computer via USB or FireWire. Most enclosures have a separate power adapter to provide power to the hard drive.

On the other hand, if you use a SATA-to-IDE adapter cable, you'll need to mount the hard drives inside your computer case, connect them to a Molex power cable, and then connect them to the motherboard with the adapter cable.

Software

Q My antivirus program stopped downloading new updates (which it refers to as virus definitions). According to the program's Web site, I need to pay an annual fee for this. Are there any free alternatives? I'm on a tight budget and can't afford annual fees.

A Shelling out annual subscription fees for antivirus software isn't always necessary because there are several antivirus programs available that are free for noncommercial use. These programs range from standalone applications that run continuously on your computer to Web-based programs that you can use to perform on-demand scans.

When selecting an antivirus program, two key features you should look for are timely updates and live scanning, the latter of which means that the antivirus program continually scans your system, looking for dangerous viruses. This also includes integration with your email client and browser. In addition, it

means that as you open a file, the virus scanner automatically evaluates the file before it opens.

One of the best free standalone antivirus programs available is ALWIL Software's avast! 4 Home Edition (www.avast.com), which features free automatic updates and offers protection against IM (instant messaging) and P2P (peer to peer) viruses. In addition to using virus definitions to identify viruses, avast! 4 Home Edition also uses heuristic analysis to identify virus-like behavior. This is an important way to find new, previously undetected viruses.

Another good free standalone antivirus program is Grisoft's AVG Anti-Virus Free Edition (www.grisoft.com), which has many of the same features that avast! 4 Home Edition has, but lacks heuristic analysis.

If you're looking for a standalone program, we recommend trying either of these programs, but make sure that you don't run both of them at the same time. Antivirus programs often have (or cause) problems when run concurrently.

If you're looking for a Web-based tool, Trend Micro's Housecall (housecall.trend micro.com) is our top recommendation. Housecall works by downloading either an ActiveX component or a Java program that scans your system. You simply visit the Housecall home page and click Scan Your PC. After you accept its Terms Of Use, Housecall will start scanning your system.

However, using a Web-based service is less than ideal for several reasons. First, it won't protect you continuously. Also, it takes longer for a Web-based service to scan your system than it takes for a standalone program—even with a high-speed Internet connection. Web-based programs are better suited as an adjunct to standalone antivirus software, or in situations where you're unable to install software on a computer.

Multimedia

Q I have an extensive music collection stored on my computer in MP3 form. I'd like to find a way to access this collection from my stereo receiver in my living room, but my computer is in the basement. Any ideas? I don't want an ugly collection of cables and other gear cluttering up my room, either.

A Although there are many ways you can accomplish your goal, our recommendation is to consider Slim Devices' Squeezebox ($249, wired; $299, wireless; www.slimde vices.com). The Squeezebox is a network-compatible music player that can connect to your basement computer over Ethernet cable or via a wireless connection.

To do so, Squeezebox utilizes a program that runs on your computer. This program, SlimServer, scans your music collection and streams it on-demand to the Squeezebox. Plus, SlimServer can accommodate MP3, WMA (Windows Media Audio), AAC, and FLAC losslessly compressed music. If you have music purchased from the iTunes Music Store, you'll have to burn the songs to CD and import them as unencrypted MP3s.

With Squeezebox, you can use either an Ethernet or wireless network (802.11g). And as long as the Ethernet cable is less than 100 meters, you should be able to use that to connect to your basement computer. In addition, the Squeezebox supports both WEP (Wired Equivalent Privacy) and WPA (Wi-Fi Protected Access). Plus, you can use more than one Squeezebox with SlimServer to distribute audio to multiple rooms in your house.

Although your MP3 audio collection lacks the fidelity offered by CDs, the Squeezebox can output its audio signal via RCA connections or digital (TOSLINK and coaxial) connections to your stereo system. The Squeezebox features a bright display that lists the song and artist currently playing, and it's controlled by a small remote. Also, it should blend in well and look good with your other stereo equipment.

If the Squeezebox is too expensive for your budget, Apple's AirPort Express (www.apple .com) might be a suitable alternative if your basement computer has a wireless adapter. The AirPort Express can stream audio from an iTunes library via its AirTunes software and connect to your stereo receiver with a digital output. Like the Squeezebox, AirTunes can stream audio to multiple rooms, as long as each is equipped with an AirPort Express.

The AirPort Express retails for $129, and you'll need to purchase an AirPort Express Stereo Connection kit, which has a price tag of $39. If you want to use a remote to control iTunes, that'll cost you a little bit extra: $59.

Frequently Asked Questions

Answers to users' most common questions about
Using Multiple Monitors

FAQ What do I need in order to add a second monitor to my PC, and how do I select multi-monitor modes such as span or clone?

There's already a video card sitting in your PC's AGP (Accelerated Graphics Port) or PCI-E (PCI Express) slot that's connected to your main monitor. To make arrangements for additional monitors, you'll need to either replace your current video card with a model that provides two (or more) video ports (connecting a monitor to each port), or install a secondary video card in an empty PCI (Peripheral Component Interconnect) slot and simply add a monitor to that new video port.

After Windows XP recognizes and installs drivers for the new video hardware, you can enable and configure the new monitor(s) by right-clicking your Desktop, selecting Properties, and clicking the Settings tab. Each monitor will appear as a numbered icon on the tab. You can select each icon and choose the appropriate resolution and color depth for each display. Remember to click Apply and OK to save any changes.

Extended, span, and clone modes are the three most common multimonitor modes. In extended mode your Windows Desktop is simply extended to additional monitors. To enable this just select the icon for your second monitor and select the Extend My Windows Desktop Onto This Monitor checkbox.

The span mode forces all of the monitors attached to the same video card to act as a single monitor, effectively creating one big monitor; because of this, all the spanned monitors must share the same resolution and color depth. If you use a video card with two or more video ports, you can clone one monitor to another and use the clone mode. This is particularly handy in instructional situations when you want someone else at another location to watch what you're doing.

It's important to remember that secondary video adapters installed in older PCI card slots won't offer superior video performance. Some applications that require rendering, and other sophisticated graphical functions will probably run better on the monitor attached to your main AGP or PCI-E graphics card.

FAQ Why is my sound distorted when I play a DVD movie on my second monitor? Is there anything I can do to fix that?

The problem usually results from shared IRQs (interrupt request lines) between sound and video hardware. Although modern PCs allow for IRQ sharing, multimedia video and audio data is very time-sensitive, so when you installed a second video adapter on a PCI slot, you probably wound up sharing an IRQ with your audio device. The secondary video data typically overwhelms the audio data, resulting in sound corruption.

You can try moving the sound card to another PCI slot, effectively changing its IRQ assignment. Alternately, if the sound is integrated onto your PC's motherboard, try changing the audio IRQ manually through the Device Manager. In addition, you can shuffle the secondary video card to another PCI slot to find a better IRQ assignment. Check the sound card's documentation or manufacturer's Web site for specific assistance in changing IRQ assignments.

FAQ I installed a secondary video card to add a second monitor, but now I don't see a display at all after the BIOS (Basic Input/Output System) banner. Did I do something wrong?

The secondary video card isn't booting because it can't access the resources it needs for proper initialization. If you're using two different PCI video cards (which is common on an older PC), try swapping those cards to different slots. If you're using an AGP and a PCI video card, the PCI card may need to be set as the primary video adapter.

Check your BIOS setup and see if there's a setting that determines which video device (AGP or PCI) should be booted first. If you have an AGP *and* a PCI adapter, try reversing the boot priority; for example, direct the BIOS to boot the PCI device before the AGP device.

It's usually best to have the AGP video card set as the primary device because the AGP card will typically offer a far better performance than a PCI device.

If you reverse the initialization order and the problem disappears, you can try to replace the PCI card with a newer model that will initialize properly when the AGP card is set as the primary device once again.

Dell Dilemmas & Nero Headaches

My mother has had several problems with her Dell PC. One of the more recent issues occurred in January 2005. At that time, Dell dispatched a serviceperson to install a new hard drive. When the serviceperson arrived, however, he determined that the current hard drive was not a problem and applied a short-term fix rather than install the new drive. Finally, in July, the system refused to even turn on. At that time, I contacted Dell to find out why the technician didn't install the new hard drive. Dell informed me that the technician had charged them for the drive, and there was nothing they could do about it. When I called the technician, he informed me that he no longer worked for Dell and hung up on me. Dell's technical support refused to listen to me when I told them the system refused to even turn on and refused to issue another replacement drive. Because we were not getting proper support from Dell, I advised my mother to stop making payments on the system. Now she not only has a broken system, but she's also receiving calls from collection agents on her outstanding balance.

Jan Chisholm
Carrabelle, Fla.

Because Jan was handling the issue for her elderly mother, we contacted Dell and passed along Jan's contact information. Dell contacted Jan and offered to replace the system and refund the money spent on an extended warranty. Jan, however, refused the offer because Dell refused to provide any financial relief on the past due amount. We contacted a PR representative with DFS (Dell Financial Services) regarding the issue. Although he could not waive late fees and accrued interest, he did get Dell to provide an additional $200 credit for bringing the account current.

While our PR contact at DFS sympathized with Jan and her mother, he also pointed out that withholding payments under any circumstances is a violation of Dell's credit agreement. DFS is an entirely different department and has no contact with Dell's customer service or technical support documents, so withholding payments will only draw the attention of collection agents.

Regarding the replacement hard drive, Dell maintains that the incident in July was a software issue, not a hardware issue that might require a replacement component. It appears there was probably some confusion between the Dell tech support agent and Jan regarding the exact issues with the PC.

I purchased Nero 7 Ultra for video editing on my Windows XP Media Center PC. The software initially worked fine, but now it completely freezes whenever I add a new video file. The only way to exit the program is to manually kill the task. I have tried to uninstall and reinstall the software several times without any luck. I have emailed several tech support requests to Nero, but I can't get a proper response from the company. At one point, I did get an email requesting that I attach a log, but I heard nothing further after submitting the log.

Edward Hess
Nampa, Idaho

We contacted Ed requesting any serial numbers or case numbers that Nero might be able to use to reference Ed's previous help requests. We passed that information to Nero along with Ed's contact information. Nero responded quickly by sending an email response the next morning and advised Ed to upgrade Nero Vision from version 4.0.0.1 to 4.1.0.9. The upgrade solved Ed's problem with Nero. (Nero Ultra 7 is a collection of tools. The one Ed was having problems with is Nero Vision, which is on version 4.)

May I Have The Definition, Please?

Technology can be very easy to use and understand, but the language is not always so easy to decipher. Because computers and technology have become such a huge part of our everyday lives, the non-computer-programmers among us need to be able to speak the same language. So if you're not quite sure what a wafer or zaplet is, you can search SmartComputing.com's Dictionary/Encyclopedia and find out! This online dictionary provides plain-English definitions for terms, abbreviations, and acronyms you're likely to encounter. This link also includes an encyclopedia that offers in-depth descriptions of everything from daemon to radiosity.

Log on to SmartComputing.com and click the Computing Dictionary & Encyclopedia link on the blue left-side menu to start expanding your vocabulary today!

Search the alphabet for the term you're looking for or use the Search box to find words that contain, begin with, or exactly match the term you're searching for.

You can also purchase a print version of the dictionary by clicking the Click Here! link at the bottom of the page. This "Illustrated Book Of Terms And Technologies" issue from *Smart Computing*'s *Reference Series* is brimming with information on everything you need to know about computers, Web sites, email, and more. You'll find the Top 25 Frequently Asked Internet Questions, top names in the computing industry, and helpful Web site information. Log on to SmartComputing.com and check it out today!

Trapped In My Basement

By the time you read this, I will probably have starved to death.

No, I'm not on a diet, and it's not as if there's no food in my house. There are plenty of goodies in the cupboards and lots of stuff in the fridge; I just can't get to any of it.

It's my wife's fault, actually.

Perhaps I should back up a bit. . . . At first, Lesley swore up and down that she would *never* use a computer. "Why would I want one of those?" she sneered. "It's just an expensive typewriter!" But somehow she ended up with a computer.

Then she said she would never use email. "It's too impersonal. Why would I dash off a note like that when I could write a nice letter on beautiful stationery?" But somehow she ended up using email. All of the time. I mean, she can spend *hours* at it.

After Lesley finished not wanting a computer or email, she decided she didn't want a digital camera. "Film is better!," she insisted. But you know what happened. We just returned from a three-day trip during which she took more than 180 digital photos, mostly of our granddaughter. We have sequences of 10 or 12 shots of little Shaylyn in which the only discernible difference is that the angle of her head has changed 1.7 degrees since the previous shot. (And all the photos of Grandpa seem to show a fat old guy who looks nothing like me. I figure that Lesley must have also purchased an "old man" filter for the camera. I didn't even know they made such a thing!)

Soon after not wanting a computer, email, or digital camera, Lesley decided that she also didn't want an MP3 player. Naturally, she now has an iPod with 1,643 songs on it (Who even *knows* 1,643 songs?), and she always seems to have it with her: If we get stuck in a long line at the grocery store, she gets to listen to Mary Chapin Carpenter or Sinatra or Santana, while I'm forced to amuse myself by thumbing through the supermarket tabloids. (Who knew that Michael Jackson was an alien love-child?! Actually, I suppose that would explain a lot.) At first I thought that she'd had the iPod surgically attached to her person, but that's not the case. If she had, she wouldn't be able to plug it into the cute little iPod docking station (which she also didn't want) that she keeps in her car to transmit music from the iPod to her car's FM radio.

And it never ends. In addition to not needing a computer, email, digital camera, MP3 player, etc., Lesley also didn't need her own blog, a GPS for her car, a wireless printer for her office, a PDA, a Kodak EasyShare Gallery account, or a cell phone, all of which she now owns and uses daily.

So back to my predicament: I spend long, hard hours working at home in my basement office. (And by "working," of course, I mean watching baseball games, napping, surfing the Internet, reading spy novels, and eating forbidden chocolate chip cookies.) Naturally enough, I sometimes get hungry while I'm down there, especially if I've run out of cookies. But in order to go from my office to the kitchen, I have to walk past Lesley's office. And here we arrive at the crux of my problem: Because of her burgeoning collection of electronic gadgets, I can no longer *get* past Lesley's office without being drafted to solve some tech support problem. It doesn't matter how quiet I try to be; it's an old house, and the floors creak. (Also, I tend to stumble, grunt, and drop things as I make my way up the stairs. This makes being sneaky somewhat difficult.) As I attempt to creep past her door, I hear a plaintive wail: "Oh, honey? How come this isn't working? It worked before."

Now, the problem could be just about anything: a printer that suddenly prints only in blue (apparently women care about such things), an iPod that won't sync with the computer, a PDA that spontaneously reboots, email with missing attachments . . . well, you get the idea.

I can solve most of these problems, given some time and a few chocolate chip cookies. But I'll probably never be able to sneak into the kitchen again, and it's all because of these gadgets that my wife swore she didn't want and would never use.

What really worries me is this: Not long ago we ran across a Web site on which a company was offering "personal submarines" for sale for $2 million. Each. (Seriously. See www.ussubs.com.) Lesley turned up her nose and said she'd never want her own personal submarine, that it was way too much money and that it was silly and probably unsafe. So I'm expecting delivery any day now, and I have no idea where one stores a submarine. Perhaps it'll fit in the kitchen? ‖

BY ROD SCHER

Rod Scher *is a former software developer and a recovering English teacher. He's also the publication editor of* Smart Computing *and will no doubt continue in that position until such time as his boss reads this column. Contact Rod at* **rod-scher@smartcomputing.com.**

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"Just about every day, I come across a cool product which strikes me as perfect for someone I know. I've shared some of my favorites here."

FAR-OUT DIGITAL SHOOTING

Canon PowerShot S2 IS

"The PowerShot S2 IS is a great camera with an exceptional stand out: a 12X zoom lens with image stabilization. With that zoom, you've got four times the zoom capability of most point-and-shoot digital cameras. And with image stabilization, you avoid the blurry images that are so common with extensive zoom."

Canon PowerShot S2 IS
#280PSS2IS

CAR VIDEO, WHENEVER YOU WANT IT

Audiovox D1210

"What I like best about the D1210 is that it's not permanent. You can hook it up for trips, and let your backseat audience enjoy movies on the 10" screen all the way to the beach. And then you can tuck it away until the next outing."

Audiovox D1210   **#220D1210**

SLIMMED-DOWN MUSIC TO GO

Apple iPod nano

"Everything Apple had to say about the nano is true — these things are just plain *cool*. They work like larger iPods — which is to say they make it easy to listen to hours and hours of music — but they've got a super-slim design and a beautiful color screen to boot. And there are plenty of accessories you can choose to spice up the look of your nano."

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